



Ex LIBRIS  
UNIVERSITATIS  
ALBERTAEANAE







Digitized by the Internet Archive  
in 2019 with funding from  
University of Alberta Libraries

<https://archive.org/details/housinghome00shul>





# HOUSING AND THE HOME

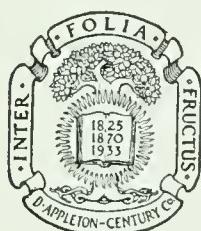


TX  
301  
S56

# Housing and the Home

BY HAZEL SHULTZ

INSTRUCTOR, HOME-STUDY DEPARTMENT,  
UNIVERSITY OF CHICAGO; AUTHOR OF  
"MAKING HOMES"; CO-AUTHOR OF "A  
FIRST BOOK IN HOME ECONOMICS," ETC.



DRAWINGS BY JEAN BUSBY

NEW YORK

D. APPLETON-CENTURY COMPANY  
INCORPORATED

COPYRIGHT, 1959, BY  
D. APPLETON-CENTURY COMPANY, INC.

*All rights reserved. This book, or parts thereof, must not be reproduced in any form without permission of the publisher.*

349

## PREFACE

During recent years there has been much talk about housing as well as a variety of efforts toward achieving better housing conditions. As a nation we are becoming aware of needs for raising standards. Individual homeowners and renters have been encouraged to improve property; philanthropies, private societies, and government agencies have produced apartment buildings and single unit communities. Such activities are, in the main, constructive.

If better standards in housing are to have permanence, however, there is need for engendering in the minds of the next generation concepts of housing as a universal need, and one for which there is individual as well as group responsibility. The present volume attempts to give a concept of housing as an effective environment and to suggest some ways in which the individual can evaluate and work constructively toward better housing for himself and others.

This book has been prepared specifically for use in secondary-school home-economics courses and is based upon an analysis of state courses of study up to 1938 plus review of literature in the field of housing and some study of housing projects abroad and in the United States. Housing projects enter into the writing in an incidental way only being regarded as means to ends rather than ends in themselves.

Since housing, like nutrition, is as much a need for boys as girls, schools with home-economics courses including boys and those with social studies that include housing may find it of value. Having been designed for the field of home economics the book includes material of home furnishing that may give it reference value for art departments. It has been suggested that adult study

groups will be interested in parts of it. These readers should bear in mind that in selection of both narrative and photographic illustrations as well as in the general organization the book was planned for secondary-school use.

The writing of a textbook involves the materials, time, and suggestions of many persons not recognized either in the courtesy lines or footnotes. For schedules of high-school girls' days, I am indebted to the several pupils who kept them and to their instructors, my home-study students, who requested that no individual recognition be given. Likewise many college students, not singly mentioned, with whom I have lived offered courtesies and points of view. My indebtedness extends likewise to librarians in addition to those listed. Mrs. Lucile Keck, librarian of the Joint Library, the Public Administration Building, University of Chicago, made available special sources on housing; Miss Winifred VerNooy, reference librarian of the Harper Library, and Mrs. Ruth Emerson, librarian of the Weibolt Library, the University of Chicago, assisted in a variety of ways. My long-time friend, Miss Hannah Logasa, librarian of the Laboratory Schools, the University of Chicago, suggested many of the references used in Chapter 4.

Though she has no responsibility beyond that of a former instructor, I am indebted to Dr. Hazel Kyrk for the point of view regarding consumer and producer, and similarly I am indebted in a general way to my neighbor, Dr. Maud Syle, for information regarding research on cancer. Dr. Grace Wertemberger, of the Physiology Department, the University of Illinois, devoted a considerable amount of time to helping with the collection of sources of information and consulting on the section dealing with diseases related to housing. Dr. Mercy Southwick in the Pathology Department, the University of Chicago, had suitable slides made of clinical lung tissues to show the nature of soot deposits.

I wish to express my appreciation to my personal friend Mrs. Cleveland White of Oak Park who made her home available for photographing, and who tested and contributed an eight-hour-day work schedule for employer and employee; to Mrs. Lucille Dean of Rock Island for collecting and organizing the items under advice for household employers and employees; to Margaret Kullander

for helping to check the manuscript and read proof; to Catharine Hurst for help on the index; and to Louis Shultz, Jr., attorney, for reading the last chapter and making suggestions.

I am deeply indebted to Miss Helen Heinatz, the *Architectural Forum* for repeated assistance in locating architects and photographers from whom illustrations were obtained; to Mrs. Isabelle Hopkins, Director of the Editorial Division of the United States Department of Labor, Children's Bureau, for the use of galley; and to members of the United States Housing Authority for both mimeographed material and photographs. Miss Rosamond Losh, Executive Secretary, Kansas City Children's Bureau, and Mr. L. J. McInnis, Jr., Associate Editor of *Public Safety*, helped in locating information and illustrations relative to safety in the home.

H. S.



## CONTENTS

	PAGE
PREFACE . . . . .	V
CHAPTER	
1. WHY STUDY HOUSING? . . . . .	1
<i>A Portfolio of Rooms</i>	
<i>Between pages 22 and 23</i>	
2. HOME IMPROVEMENT . . . . .	23
3. HOUSING AND HEALTH . . . . .	73
4. SOCIAL SIGNIFICANCE OF HOUSING	123
5. HOME FURNISHING . . . . .	162
6. MANAGEMENT WITHIN THE HOUSE	203
<i>Historic Influences and Housing Projects</i>	
<i>Between pages 262 and 263</i>	
7. THE SELECTION OF MATERIALS FOR HOUSEHOLD USE . . . . .	263
8. PAID HOUSEHOLD LABOR . . . . .	306
9. LOCATING AND PLANNING A PLACE FOR A HOME . . . . .	337
10. THE COST OF HOUSING . . . . .	370
INDEX . . . . .	409



# 1

## WHY STUDY HOUSING?

Housing is so intimately bound to the life of civilized man that every one is affected by it. Those who use their homes least must have a place to sleep. But most persons need housing for eating, bathing, keeping their clothes in order, entertaining friends, and spending part of their leisure time. These are activities of consumers, and we are all consumers of housing though but part of the population produces it. Housing is, then, a general problem that concerns all of us and is more inclusive than housing projects or new buildings. Through the pages that follow you should get a concept of housing as an effective environment that affects all of us.

Before starting to read write answers to the following questions, and after reading check them to see where you can make clearer and fuller answers:

1. Name some of the human needs that good housing satisfies.
2. How do you distinguish good and bad housing? What is a good standard?
3. Is there much poor housing in the United States?
4. Under what circumstances might a housing project not insure good housing?
5. How does a study of housing differ from a study of architecture?
6. Why is it important that citizens other than architects and builders be interested in good housing?
7. In what ways are you influenced by housing?



Housing a universal need. Two native African boys, sixteen and seventeen years of age, smuggled into the United

States by an uncle who later abandoned them, were brought into a Chicago court, because among other offenses "they slept in the streets." To them lying in the street with the open sky as a canopy was preferable to feeling cramped in a miserable basement room. But it was not for them to choose. They were in a country where living in houses, no matter what the kind, was considered essential.

**Standards.** Society has certain undefined housing standards below which individuals may not fall without attracting unfavorable attention. The standard that is offensive in one community may not disturb another. Yet to those who observe, most communities have standards of some type. In one, every individual family as well as all janitors or yard men of apartment buildings take responsibility for keeping the lawn cut, weeds pulled, and walks clean. The buildings are all in repair and painted or otherwise cleaned regularly as needed in that community. Buildings are constructed and managed to be safe from earthquakes, tornadoes, floods, or other hazards common to the locality. They are fireproof or so planned that every inhabitant could easily escape in case of fire. They are so constructed and managed that vermin are neither attracted nor harbored. Individuals moving into the community may see at once the standard at which they are expected to live if they are to become a part of it. Though standards may not be listed and discussed, they are as clear as a printed poster even to those who pass by. A standard may be that of mere shelter, healthful living quarters, or health plus comfort, convenience, and luxury. There may be a high standard for some and a low for others. To have universally good housing for every one implies considerable understanding upon the part of all people about housing, for we know it is a question of both good buildings and good ways of using good buildings. The best of buildings quickly deteriorate into slums if tenanted by persons who use them in slum fashion. Housing is then a problem of using as well as constructing buildings.

*Bases for Standards.* Some standards are based upon eye appeal but, like clean clothes on a dirty body, these standards

may be superficial. They do not bear inspection. To build standards for better living every one needs to have a common understanding of human needs in housing and the relation of building and management or care to these needs. *Protection or shelter* is an elemental need. Good housing must protect from storms and other hazards of nature, from fire, from bad sanitation, vermin or disease carriers, and even from human beings with malicious intent. Safety, which is of first importance, has many ramifications as you will see more clearly as you read farther. Then, too, for physical health we need *comfort*, the comfort of healthful temperature and humidity and the comfort of places for relaxation. *Convenience* is likewise a need in homes as well as in businesses and industries. *Freedom, privacy, economic security, and self-respect* are other human needs that are aided by good housing. They contribute to social life and, unlike the considerations that might be classified under protection, differentiate human housing from housing for lower animals. *Beauty* or *esthetic qualities* appeal to the senses, thus adding pleasure to good housing. In a subtle way the pleasure and satisfaction of true beauty adds calm and happiness that may be reflected in better health. It is very hard in human housing to know how and to what extent beauty is a real need. Certain it is, though, that esthetic qualities are a true consideration when planning places for human habitation.

Social prestige. Individuals occasionally build and keep up their homes more because they seek to create or maintain social prestige than because they recognize a need for creating a safe and healthful environment, providing comfort or even conveniences. In these cases the living quarters for employees may be strikingly poor. Such houses are likely to be elaborate beyond all others of the community, often ornate, and frequently so austere as to be repellent. Occasional examples are to be had of those that are actually planned to be awe-inspiring. Although planned as good housing they, like slums, fail to meet human needs. Instead of homes they are sizeable museums.

**Housing not a project, loan, or legislation.** Much has been said in recent years about loss of homes through mortgage foreclosures as well as overcrowding because of the relationship of unemployment and undependable incomes to rents and building upkeep. There is likewise current discussion of slums, slum clearance, housing projects, the Home Owner's Loan Corporation, and housing legislation. All are activities within the field of housing. Housing projects are among the means used for creating employment, stimulating the sale of building materials, forcing money into circulation, and gradually demolishing the existing slums.

Federal or state legislation that makes loans more easily possible for the improvement of old homes and the building of new residences enables persons to carry on housing activities that should improve living conditions. But neither housing projects, loans, nor legislation is housing. One does not think of Food and Drug Acts as synonymous with nutrition though food and drug legislation may be the means of preventing adulteration and therefore insuring safe food which in turn nourishes the body. Strangely enough, housing, to some people, is synonymous with housing projects or Federal aid for housing. Housing projects, whether sponsored by private philanthropies or government agencies, are but means to better housing for a part of the population. Like the houses built by individuals they may represent either good or poor living according to the way they are built and used.

**Housing not a style of architecture.** So also a study of styles in building is not a study of housing but of the forms of building used by different racial or national groups at different times. Through a study of historic styles, however, we can understand why certain forms of building were popular. Our northern Colonies were subject to long, cold, and snowy winters. Since the early settlers who came to this inhospitable climate were unable to bring buildings and furniture with them, they were forced to adapt their ideas of housing which, of course, were formed in Europe under different conditions. The earliest houses were whatever they were able to build; a de-

veloped style of building could not come to pass for some time.

Historic influences are passed along from one generation to another. Established forms become known as styles. In the United States where the population is cosmopolitan it is possible to find in recently constructed houses style influences from all parts of the world. Because we are a cosmopolitan population individuals and groups have, like the colonists, tried to reproduce or to adapt what they knew and liked of Europe, Asia, or other places. There is the English influence in our half-timbered and Georgian houses, the Dutch in a certain low cottage type of so-called Dutch colonial, French in the French provincial, and Spanish in the patio type. These, as well as other national influences, make us aware of different ways in which people of other lands have tried to solve problems of housing, but even a study of building styles is not necessarily a study of housing. It is only a part of it.

**Housing a problem of living.** Housing is broader in scope than mere construction of new buildings or the upkeep of old. It is more than a study of housing projects or styles of architecture.

To a limited extent housing may properly be compared to nutrition for essentially it is a study of the relationship of shelter to human health, comfort, efficiency, and enjoyment just as nutrition is a study of food in relation to growth and the maintenance of health. In this sense housing is a very new subject.

Twenty-five years ago nutrition included little more than a study of the heat and energy values of food. Later the value of mineral salts was recognized, and only within recent years have we been learning about the vitamin values. So in the case of housing. Some of its relationships to living are clear and measurable even at this time; others are still vague and intangible.

You who begin the study of housing now may watch and participate in its growth for in addition to those who become architects, contractors, real-estate dealers or salesmen, masons,

plasterers, painters, carpenters, building managers, janitors, interior decorators, individual home builders, or home-makers, there are the even greater number who will reap the benefits of good housing as consumers or users of it. A very large but nevertheless limited part of the population is always involved directly or indirectly in the production of housing but even more persons are users or consumers for we all must have housing.

Housing in the United States is poor as well as being made an issue in request of the housing regulations had been "inadequate." The United States调查 in twelve cities of the state at the principal authorities. These were cities in which as the Board somewhat ironically put it, "...."<sup>1</sup>

One city which is typical of the tenement per cent of the worst housing of the city not even a window direct from another. As to toilet facilities in the central, congested buildings had toilets in a possible condition and even through away the stench. In the third case the rear was almost of the tenement dwellings in the air by a vertical ladder. "The tenements are bad as to the atmosphere of the whole area the Board's restrained and businesslike understatement is perhaps more eloquent than

Board refused to name was chosen as in that city the Board discovered that 17 per cent of the buildings in the central, congested areas used for dwelling had dark rooms with "no outside window, an interior wall to admit light and air in-room." These rooms were usually bedrooms! "despite the fact that the area surveyed was the district of the city, 12 per cent of the buildings. Several of these were in the filthiest As the block was closely built on all sides center, there were few air currents to carry stench spread to numerous adjoining dwellings. .... stench from yard toilets a hundred feet in overpowering in the halls when the street doors opened." Only one of the multi-family buildings surveyed had a fire escape—and that was a mere mockery. There is scarcely need for the statement that most of the tenements are unprovided with gas, heat and hot water."

Dickens' exclamations: "A strikingly depressing appearance of the region as a whole results from congestion of buildings, ironors of *Fortune*, *Housing America* (New York, Harcourt, Brace and World, 1933) p. 8.

regular location of structures on lots and blocks, rear dwellings, bad state of repair, sheds and ramshackle buildings cluttering yards, unworkmanlike construction and repairing, and the fact that private dwellings, tenements, business and industry all exist side by side in a helpless conglomeration." In conclusion the Board remarks that the city was not selected as an outstanding example of bad housing. "The Board recognizes that most of the conditions described exist to a greater or a less<sup>er</sup> extent in other cities of the state."

But don't make the mistake of thinking th  
confined to New York cities or even to cit  
belongs to the country as well. Human be  
as well housed as animals. In 1926 the D  
culture published a bulletin entitled *The  
of Living*. It was based on a study of 2  
farm families in eleven states including V  
mont, Massachusetts, Connecticut, Kent  
Alabama, Mississippi, Kansas, Iowa, ai  
that,

Slightly more than a twentieth of all the  
completely modern; that is, fitted with cer  
tral lighting systems, running water, kitch  
(equipped with a stationary tub and bov  
sewage disposal. About a fifth of the home  
ern; that is, fitted with a part of the imp  
*most three-fourths of the homes have no  
provements mentioned above.* And these, if  
are not squalid shacks which advertise the  
appearance, but the externally pleasant &  
the best farming communities....No age  
in reducing the Mexican shacks of the Sou  
the South to the decency of statistics. Certa  
however, been made. The tenant farms of Tennessee and Georg  
and Mississippi and Kentucky and the Carolinas—where a diet  
fat-back and molasses and corn bread and moonshine prc  
cash crops and pellagra, and where Negroes live five or mor  
bedroom in unplastered houses with sashless windows, an  
whites live little better—have attracted the attention of

bad housing is  
; in general. It  
are often not  
ment of Agri  
nners' Standard  
elected, white,  
ampshire, Ver  
South Carolina,  
o. They found

es reporting were  
heating and cen  
k and bathroom  
indoor toilet and  
re partially mod  
nents named. Al  
the modern im  
t be remembered,  
ficiencies by their  
astoral homes of  
has yet succeeded  
est or the huts of  
observations have,  
Georg  
cash crops and pellagra, and where Negroes live five or mor  
bedroom in unplastered houses with sashless windows, an  
whites live little better—have attracted the attention of

commissions if not the attention of local builders. The Children's Bureau finds 40 per cent of the tenant families in one section of Mississippi living two or more to a room, 10 per cent of the whites sleeping four or five to a room, 11 per cent sleeping six or more, and cases of nine and even ten in a single bedroom. In sections of that state there are no sanitary devices—not even privies—for 60 per cent to 85 per cent of the whites and blacks—and the same thing appears in parts of Georgia, North Carolina, and Texas. But it is not true of the South alone. In a county of Montana, families of good, adventurous, sturdy stock live in sod and gumbo houses or in dugouts as well as in log or tar-paper dwellings and in structures of frame. Almost half of the houses are of one room and nearly a quarter have no privies, to say nothing of modern toilet appliances.

**How have these bad conditions come about?** Chiefly through neglect in considering the importance of housing as a problem of living. We do not commonly look upon housing as we do upon nutrition. More frequently it is a commercial problem of what is the rent, or what the cost of buying and owning. From the opposite side the question may be: "How much income will a given building produce?" High rents on indecent buildings is no new problem. There was much of this before the World War.

The World War, however, affected housing in a marked and nationwide way so that each and every one of us, whether born or not at the time, still suffer the results. With a large proportion of the man power of a nation busy killing, making munitions, and manning boats to carry supplies for destruction purposes, little time is left for planning or building healthful and pleasant new homes or keeping up those already built. During the war period, deterioration went on with an increasing shortage in good housing.

**Deterioration.** Housing appears fixed and stable, yet deterioration is constant. Every day leaves its mark though it may not be visible except by the most careful observation. However, when a house is left untenanted for six months or a year the evidence of disuse will be plain. Grass will grow ragged and dead leaves will be blown unwelcomely into eaves, door-

ways, or corners. Shingles loosened by rotting are torn away in wind storms, window-panes are broken by vandals; and other damage is usually done. Only living in and working with buildings retards the processes of deterioration. This living in and keeping up is as truly a part of housing as the construction of new buildings. Nevertheless, most persons think first of new buildings when the subject of housing is raised.

**Housing influences.** Housing conditions of one generation affect the next. The boy or girl raised in a comfortable home may when dependent upon his or her own earnings find only unhealthful housing at the figure he or she can afford. Good national housing means at least the possibility of health for every person. But housing can be much more than mere physical health for every individual. It can be a means to free and gracious living—living that takes into account the social amenities, the enjoyment of members of the social group living in the house and friends from outside. This is a human need in housing often overlooked. So little has this been recognized as a human housing need that a group of highly educated business men in discussing plans for dormitories agreed that only office, hall, and dining space need be allowed on the first floor and only student rooms on all other floors since there was on the campus a building devoted to athletic and social affairs. The need for having living-room space into which friends could be invited when they happened to walk home with an occupant of the building was not recognized.

Again in planning a large housing project for families all the rooms of each apartment were made to open onto a long hall so that every room except the kitchen could be used as a bedroom. This was deemed expedient because all adult members of the families to live there would work long hours at low-income jobs some distance away so that their chief need in housing would be for bedrooms and a small kitchen where one or two at a time could prepare and eat breakfast, occasional dinners, or light lunches. Furthermore, the project was to have a large recreational hall to take care of all social affairs. Social life that would include the incidental and every-

day contacts of working, eating, and spending part of one's leisure time with others was remote to the thinking of each group of planners. Social living in this sense represented waste space that would be costly to maintain because such space could not have a maximum of use.

**Influence of poor planning.** All high-school students expect to use housing in one form or another for at least forty or fifty years, perhaps sixty or seventy. It is, therefore, important to learn to evaluate housing. That is, to recognize what is good and what is bad. Not infrequently the points that are good under certain conditions and at a given time are bad under changed conditions at another date. To continue to plan and build in traditional ways often means unnecessary work and poor living conditions even though the building may be new.

The floor plan shown below (Fig. 1) is typical for more than twenty-seven thousand new houses in a single housing project.

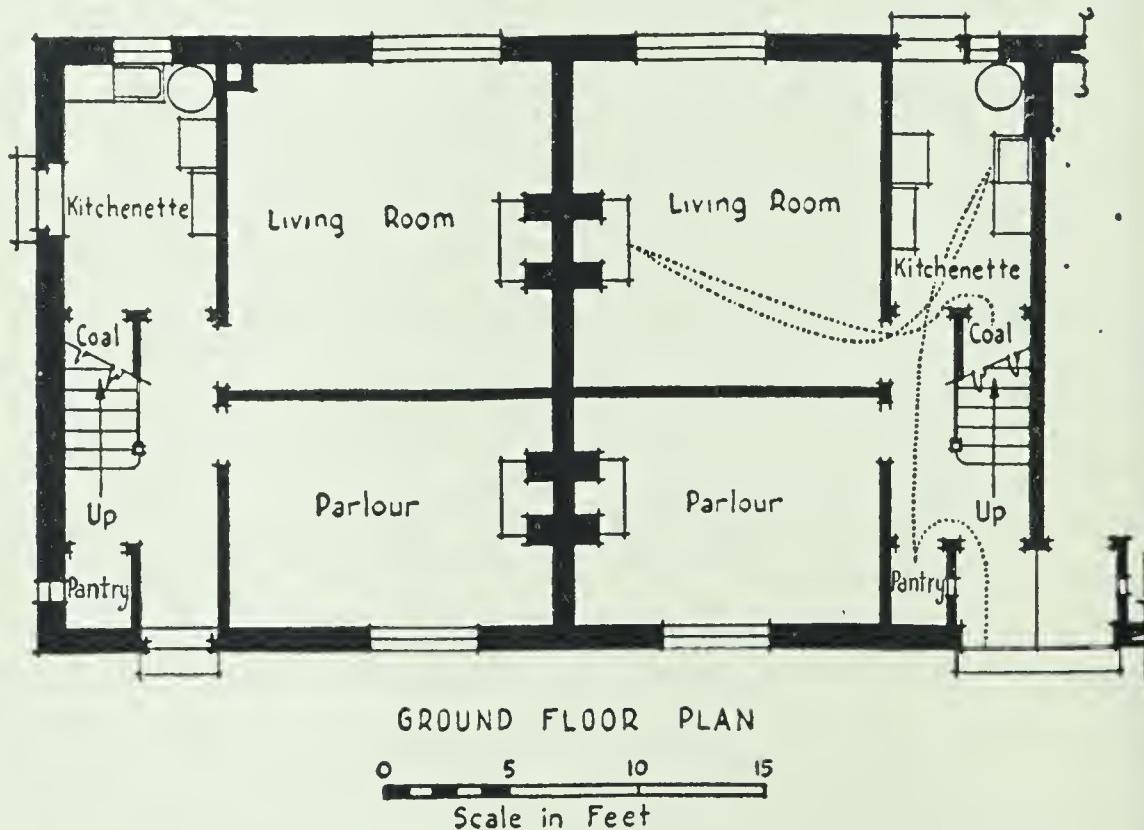


Fig. 1.

The dotted lines show how food stored in the pantry at the front of the house must be carried to the sink in the kitchenette for washing and the stove on the far side of the living-room for cooking. Coal is stored under the stairs.

You will notice that at the front of the house where one would expect to find a clothes closet there is a ventilated food closet or pantry. At the end of the hall to the left is a room known as the living-room and on the far side a combination grate and cook stove is indicated. In the small room adjoining the end of the hall one finds a sink with a cold water tap, and under the stairs space for keeping coal. To prepare a meal in this house it is necessary to bring the food from the front closet to the sink in the room at the end of the hall. Here it can be washed or otherwise prepared for cooking. To cook the food coal must be brought from under the stairs and water from the sink. Think of the needless walking necessary to prepare a meal. Think, also, of the 365 days each year for the next sixty or a hundred years during which this needless walking will be going on, for these houses were planned to stand not less than sixty and possibly one hundred years. The number of needlessly awkward dinner preparations, 36,500 in each house and 9,855,000,000 for the entire project, represents a stupendous waste of human effort. This is easy to figure because it is all in one location and the houses are fairly uniform. The useless back, leg, and headaches over the United States because of awkwardly planned houses and antiquated equipment are less tangible. We know they exist, but we can guess only about the extent.<sup>2</sup>

**Producers of housing.** There are, of course, the home owners who build their own houses. They are both producers and consumers of the same buildings. There are workmen such as bricklayers, carpenters, plasterers, and many others who may be living as consumers in one building while helping to erect others. There are plumbers, roofers, and heating specialists who may be contractors and workmen combined. If contractors only, they are responsible for the employment of many workmen. There are architects, building contractors, real-

<sup>2</sup> Hildegarde Kneeland, "Is the Modern Housewife a Lady of Leisure?" *Survey*, Vol. 62, 1929, p. 301.

Maude Wilson, *Use of Time by Oregon Farm Homemakers*, Oregon Agricultural Experiment Station, *Bulletin 256* (Corvallis, 1929).

estate operators, and their agents. Apartments and buildings erected as Federal or other housing projects need a large number of persons employed to collect rents, keep books, look after repairs, and supervise constantly the care of buildings. Janitors, firemen, yard men, and others are regularly employed for daily care.

In addition to these people there are many manufacturers of cement, lumber, plaster, brass, copper, steel, stone, paint, putty, glass, and countless other building materials as well as furniture. The products of textile mills also are important to the making of comfort in homes. Then, too, there are painters, interior decorators, and even the dyers and cleaners who derive part or all of their living from housing. There are bankers, government and other loan agencies who help in the financing of buildings; insurance companies and their agents who represent the need of protecting property from fire, tornadoes, earthquakes, thefts, and other hazards. There are social workers interested in human welfare who must concern themselves about the conditions of housing for the masses, and physicians with a similar interest. There are teachers whose business it is to explain, to demonstrate, and awaken interest as well as direct thinking about housing. There are also advertisers whose living is dependent on the volume of sales produced. They, too, are in a position to do constructive work in educating consumers about the value and use of the products advertised. This list shows that a big percentage of the population is interested in housing from the point of view of the producer whose living is wholly or in part related to housing. Yet the producer group is not as large as the consumer group for but part of the population is in the producer class whereas every one is a consumer.

Not only are all persons of the present time consumers of housing, but all persons of the future will be consumers of housing in one form or another. The forms housing will take and its efficiency in relation to human needs and welfare will depend upon how students of the present learn to think about housing. If they think only of how they can profit handsomely

as individuals, we are likely to continue to have a very unfortunate amount of housing that is dangerous to human health. The architects who plan windowless rooms, builders who weaken plaster with too much sand, plumbers who deliberately use poor materials and do work so that it will need to be quickly torn out and repaired, consumers who think that any building with a roof is good enough for human habitation are among those who handicap housing progress. Just as we come to choose between food that is useful for growth and maintenance of health, so, too, it is possible to see and measure differences in good and bad housing.

**Study of housing.** High school provides an opportunity to develop intelligence and appreciation about the problems of living. To be intelligent about the problems of housing one needs to know what it means, what relation housing bears to health and the possibility of pleasant associations with the members of one's family or friends. One should be able to recognize poor housing, to know how it came to be and what might be done in the future to prevent a repetition of the present evils. To put beauty into housing is so common a desire that we frequently choose to begin and end with interior decoration. Interior decoration, however, is to housing what a bouquet is to a room after it is cleaned and in order. It is the finish rather than the point of beginning.

Through pleasant associations with good types of buildings we acquire a liking for the best of what now exists. It is fortunate when cities, towns, and rural communities have fine examples of distinctive architecture to exhibit. Like listening to beautiful music, reading inspiring literature, being in contact with expressive paintings or other creative art, our tastes are improved and often our imaginations stimulated. Next to direct contact, photographs bring these pleasures to us. Occasionally they have an advantage over direct contact when a beautiful old building has been allowed to deteriorate through neglect. The disadvantage of a photograph is that one has but a single view. Like the photograph of a person which poorly reveals personality because it is but an instant and one expres-



Fig. 2. War.

In 1919, the year of heaviest expenditures—  
\$ 8,995,880,266 went to the War Department;  
2,000,310,785 went to the Navy Department;

---

\$10,996,191,051 went to the combined departments

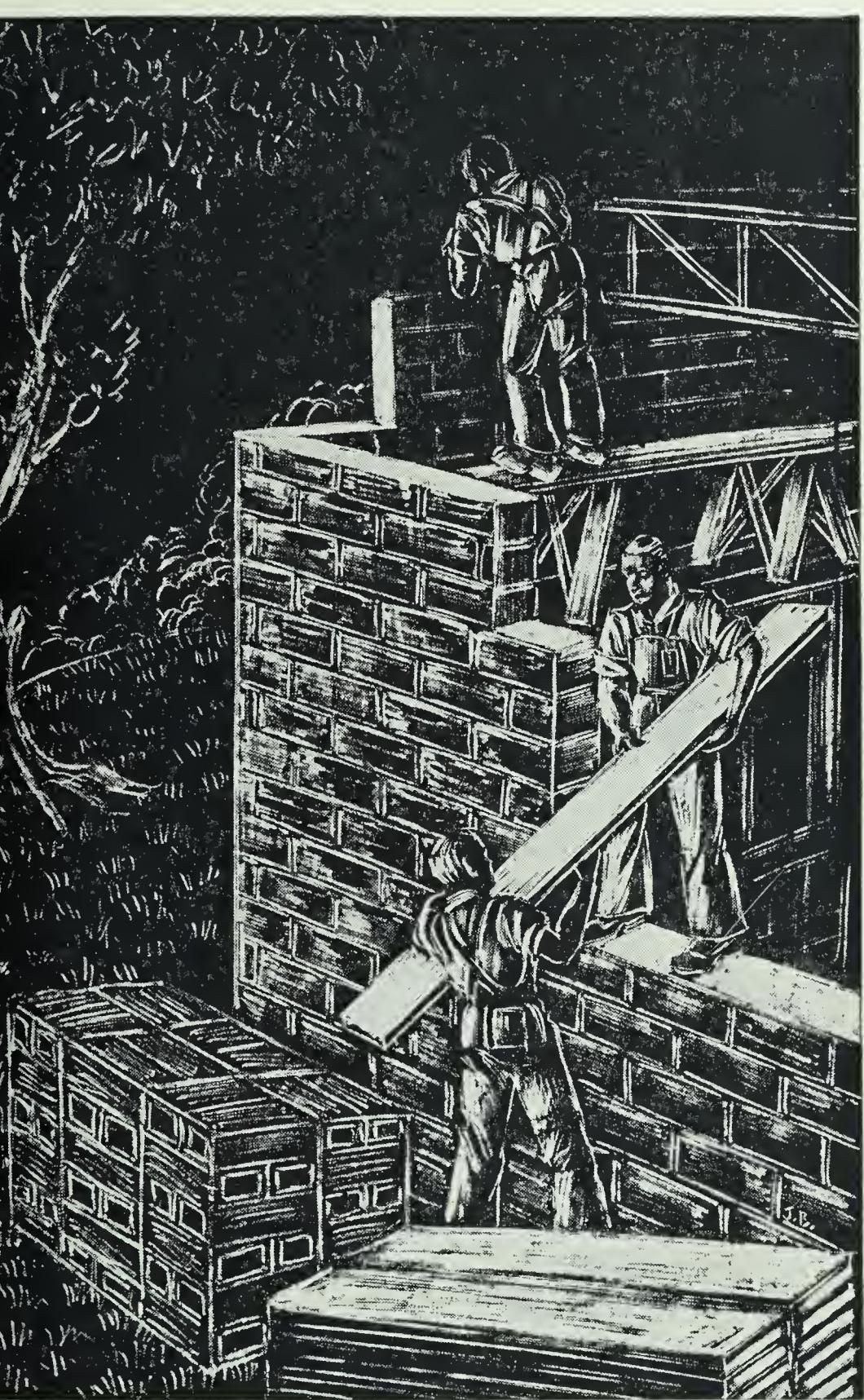


Fig. 3. Peace.

In 1925 the greatest amount was spent for new residential building. It is estimated at \$2,461,546,270 or between 20 per cent and 25 per cent of the amount spent on two war departments in the year of heaviest war costs.

sion out of a whole range of thoughts and moods, the photograph of a house also gives but a partial picture. Nevertheless, photographs serve the purpose of giving introductions to domestic architecture. They point out enjoyable elements that can be reproduced when appropriate or suggest other means of solving a building problem in a particularly satisfactory manner. If you refer to Chapter 5 you will find photographs that focus attention on elements of beauty.

Houses can be built to meet every standard for physical health, yet still be bleak and uninviting. To the animal this may mean nothing; to the human being it often means the difference between going home or elsewhere. Beauty is a most human element. Along with better sanitation we must consider how esthetic the plumbing is, as well as how restful the walls and draperies are. We might cement the entire dwelling lot for humans as for animals (and this has been done) since cement can be more easily cleaned, but the eyes are rested with the green of grass, vines, and trees. It is more pleasant to sit in a comfortable chair under a shade tree in a lovely garden than to parch under the glare of summer sun in dusty back lots.

**The consumer of housing.** But again you ask: "Why should I study housing? I am satisfied with my home, and I do not expect to be an architect or an interior decorator. I am just one of millions of high-school students."

As one of the millions you are first a user or consumer of housing. Though you may now have a home that you think little about because parents are assuming the responsibility for it, within a few years you may be one of the many in search of a room, or a small apartment not too far away from your job, technical school, or college. Even as a matter of present interest it might be worth while to know answers to such questions as, *how much housing* can be bought with 25 per cent of your family's present income used for rent, or how much twice the family's yearly income spent for a new house or apartment will buy? How many rooms could you get? How much plumbing, central heating, lighting? How many com-



Study housing in books

Visit bad housing



Visit good housing

Keep yard neat



Keep community clean

Make improvements in your home

Fig. 4. What can the individual do about housing?

munity services? How much *living* does this housing money buy? The problem of housing comes to you in a different way when you stop to think how much you are likely to earn when you first go to work. With 25 per cent of this amount how much housing could you rent outside your own home? You see you already are a consumer or user of housing, and you will continue to be as long as you live no matter how you earn your living.

**Relationship of the producer and consumer points of view.** Just as in taking a picture one selects a certain location from which to snap it, so we have different locations or angles from which to see a problem. Housing is a general problem affecting all persons, yet as individuals we see it from different angles. As previously indicated, there are two broad sides from which we can view the housing problem. Many persons will find that because they are both consumers and producers they are constantly being compelled to jump in their mind's eye from one side to the other. Certain persons, because they have no interest in housing as producers, will see only what the home owner or renter wants as a consumer. Others because of competition in their field of production focus their attention upon details and see only the producer side of housing. This may be restricted to the problems of masonry, carpentry, plastering, papering, painting, contracting, engineering, and so on. Intelligence implies that one be able to take into consideration all sides of a problem.

When the problem is as complex as housing, it is easier to get a more complete picture of one side at a time. For this reason the general point of view throughout this book is of the person who lives in houses or apartments rather than of the persons who participate in the production of housing. However, for the purpose of building more dwellings, making more furniture, creating more communities for living, the consumer side of the picture is also valuable to the producer, since if we worked intelligently we would make what we could use to good advantage. Unfortunately it is not yet possible in all cases to know what we can use to good advantage. Since we do



Workman can do honest work

Architect can plan functional and beautiful buildings



Home-maker can study housing problems with the architect

Physician can keep records on relation of housing to health



Politician can take the racket out of housing

Banker can charge fair rates for financing

Fig. 5. How the next generation can have better housing.

have certain useful informations and understandings now to help in judging standards, it is possible to add to them as time goes on. This is a big enough task to occupy a large percentage of all the pupils now in high school when of working age. There need be little lack of employment if as a nation we insist on as good human housing for every individual as a successful farmer would create for his farm animals.

#### TEST YOUR READING

1. Of what importance is housing as a subject for high-school study?
2. Who are consumers?
3. Who are producers?
4. What relation has housing to your own life?
5. What would be an ideal state of coöperation between consumers and producers?
6. Of what importance is study, planning, and the building of ideals to the problem of national housing?
7. Why are the ideals, ways of thinking and planning of every citizen as well as architects and builders of importance for improved conditions of housing?

#### DID YOU ASK WHILE READING

1. What is bad about the housing in my city or town?
2. Where is the bad housing?
3. Is there anything bad about the building in which I live? What is it?
4. What is a rural slum? Does every state have rural slums?
5. Where are the best examples of healthful and attractive domestic architecture in my city, town, or state?
6. How can one judge as to what is good?

List for class discussion the housing questions that came to your mind while reading.

#### REFERENCES

##### *Books*

ROWLANDS, David T., and WOODBURY, Coleman, Ed., "Industrial Organization: Its Methods and Costs," p. 37; "Consumption Stand-



Fig. 6. When attention is focused on housing.

ards and Housing," p. 121; "Current Developments in Housing," *The Annals of the American Academy of Political and Social Science*, Vol. 190, March, 1937.

Editors of *Fortune*, *Housing America* (New York, Harcourt, Brace and Co., 1933).

NELSON, HERBERT and MARION, *New Homes in Old Countries* (Chicago National Real Estate Boards, 1937).

*The White House Conference* (New York, D. Appleton-Century Co., 1930).

WOOD, E. E., *Recent Trends in American Housing* (New York, The Macmillan Co., 1931).

—, *Slums and Blighted Areas in the United States* (U. S. Housing Authority, U. S. Government Printing Office, 1938).

#### *Bulletins*

REID, Margaret G., *Status of Farm Housing in Iowa* (Ames, Iowa, Iowa Extension Service).

WILLIAMS, Faith, STIEBELING, Hazel K., SWISHER, Idella G., and WEISS, Gertrude S., *Family Living in Knott County, Kentucky* (Washington, D. C., U. S. Department of Agriculture).

#### *Magazine*

*Life*, May 23, 1938, pp. 52-59.

## *A PORTFOLIO OF ROOMS*

*In this collection you will find pictures of all kinds of rooms—large and small, luxurious and simple. Each one has a story, and by studying them you will see how art principles apply to interior decoration. You may want to supplement this group with pictures of your own choice.*

*At the end of the section there are descriptive notes, “Things to Notice,” as a guide for study of the pictures.*



Photograph by Brown Brothers.

1. *Recreation and relaxation?*



Frederick L. Confer, Architect.

2. *Calm and cheerful.*



Courtesy of Marshall Field and Co.

*3. A living-room of luxury and space.*



James F. Eppenstein, Architect; Hedrich-Blessing, Photographers.

*4. Use of hard surfaces and soft fabrics.*



Holabird and Root, Designers; Hedrich-Blessing, Photograph

5. Architect's arrangement of inexpensive furnishings of refinement.



James F. Eppenstein, Architect; Hedrich-Blessing, Photograph

6. Informally arranged living-room.



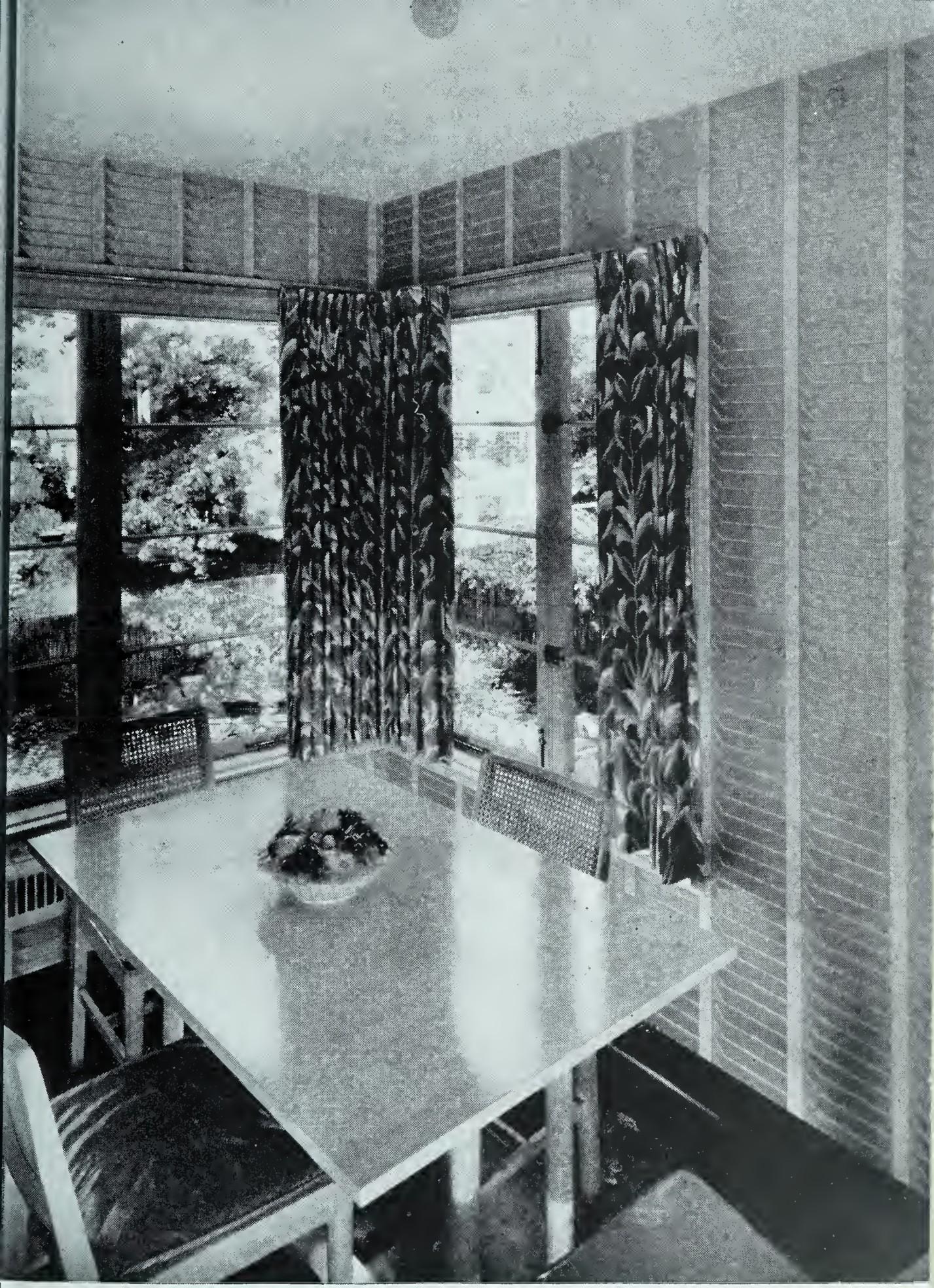
am W. Wurster, Architect; Roger Sturtevant, Photographer.

7. Built-in furniture to harmonize with the house.



*Chicago Workshops, Interior; Hedrich-Blessing, Ph*

*8. Good taste expressed with inexpensive furnishings.*



iday Costain.

9. Dining alcove with a garden view.



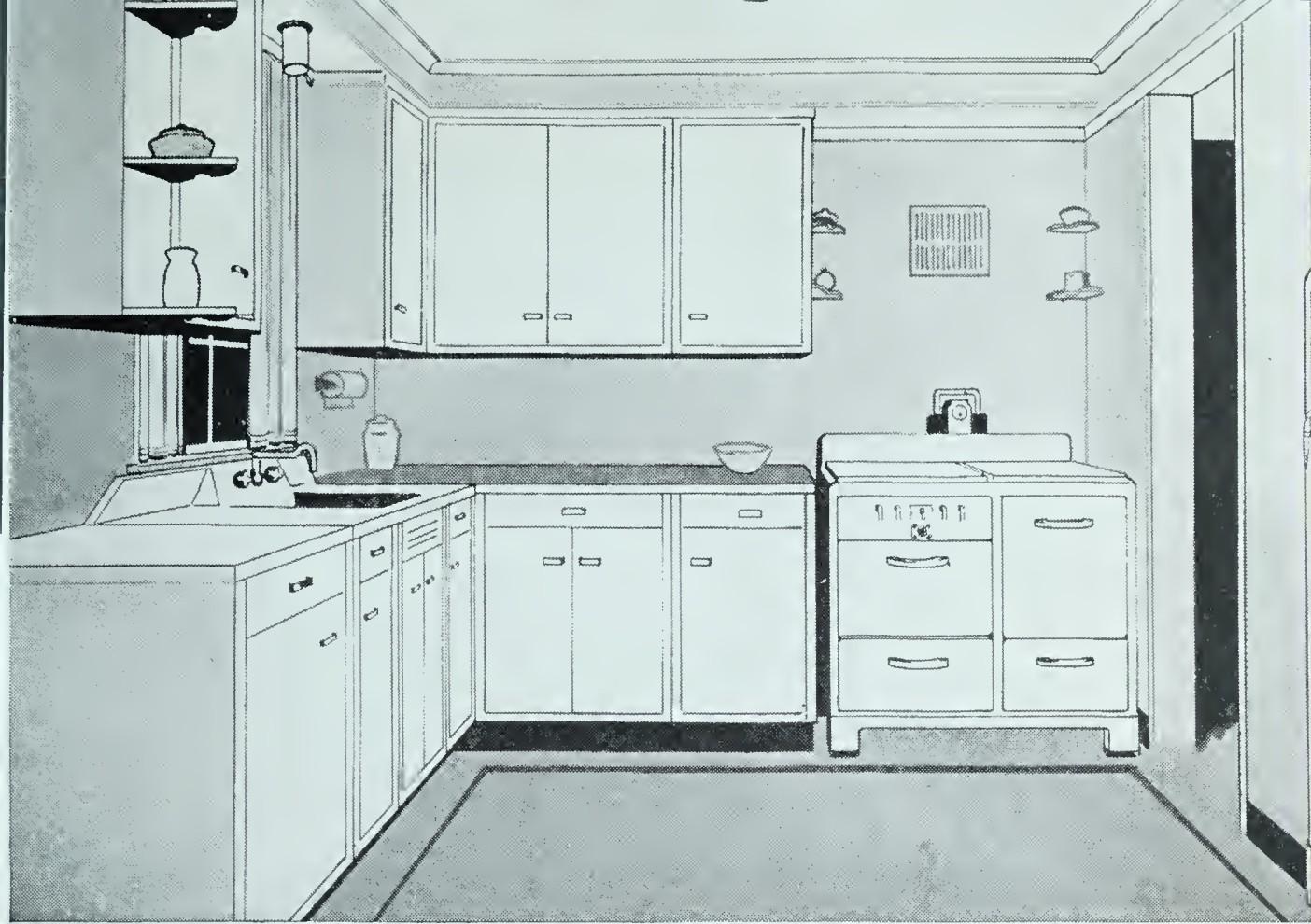
Courtesy of Marshall Field and Co.

10. A formal dining-room furnished luxuriously.



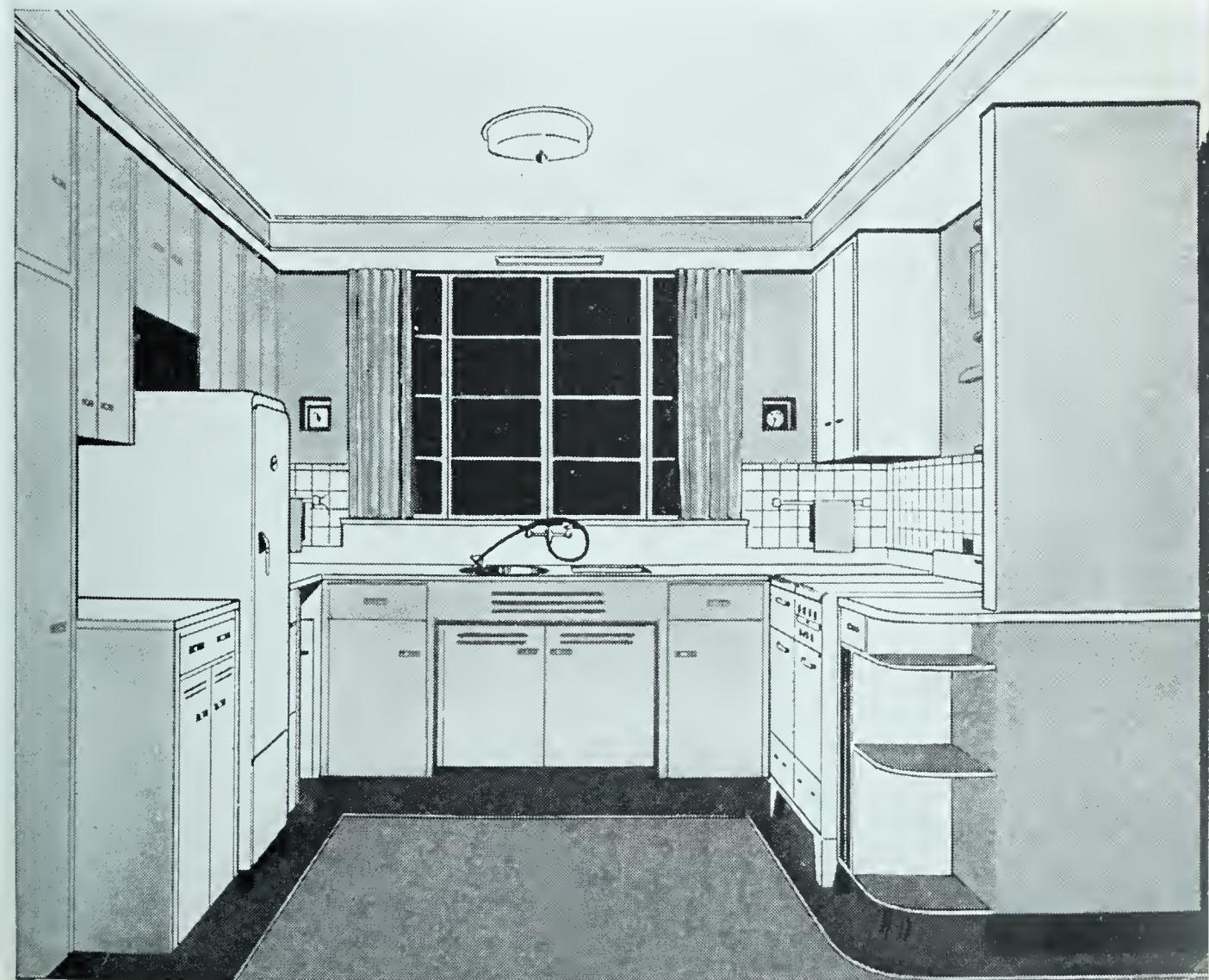
Courtesy of Marshall Field and Co.

11. Good taste in a breakfast nook.



Courtesy of Peoples Gas Co., Chicago.

12. Built-in kitchen furniture.



Courtesy of Peoples Gas Co., Chicago.

13. Compact, convenient kitchen arrangement for step-saving.



*Lucile Schlimme, Decorator; Frank Randt, Photographer.*

*14. A master bedroom furnished in mahogany.*



*Jessica Treat, Decorator; Hedrich-Blessing, Photographers.*

*15. Guest room.*



Courtesy of "McCall's Magazine," Hedrich-Blessing, Photographers.

16. Furnishing project of an Oklahoma City girl.



Courtesy of Marshall Field and Co.

17. A room for young members of the household.



James F. Eppenstein, Architect; Hedrich-Blessing, Photographers

18. *A man's study with sleeping facilities.*



Courtesy of B. Altman and Co.; Robert E. Coates, Photographers

19. *Modern Colonial furniture for an old house.*

20. Closet  
dressing table.



Marshall Field and Co.

Courtesy of W. and J. Sloane;  
F. M. Demarest, Photographer.



21. Furnishings  
suggestive of  
boys' interests.

22. Easy  
keep clean  
orderly



Courtesy of W. and J. Sloane;  
F. M. Demarest, Photographer.

Courtesy of W. a  
F. M. Demarest,

23. A closet  
to help keep  
clothes neat.



## *THINGS TO NOTICE*

The confusion. There is not one resting spot for the eyes. How art principles are violated. See p. 206.

That sliding window with view of garden is center of interest. That large areas of rugs and walls furnish rest areas. See p. 179.

Contrast of hard smooth surfaces and soft fabrics. Window decoration. Delicacy of line in furniture design. Wall mirror reflects opposite side of room. See pp. 175-177.

Dominance of glass tile wall with side windows. Softening effect of overstuffed furniture, deep pile rug and folds of long window drapery. Contrast in feeling produced by furniture of 6 and 7 as regards heaviness. Whether delicate furniture would look well in this room. See p. 197.

Refinement of line in furniture. Harmony in upholstery and rug design and in furniture and picture frame. Contrast of figured and plain areas. Balanced arrangement. Beautifully designed and well-made inexpensive furniture and rug from department store.

Good proportion of furniture to room. Unity in draperies and couch cover. Restrained decoration and good spacing of fireplace and door panels. Informal arrangement to provide for different family interests. See pp. 163-170.

Use of plain lumber in built-in furniture. Tile flooring. Relation of design in hooked rugs to room. See pp. 183-186.

Furniture and draperies in scale of this small living-dining room hence room does not seem crowded. Window treatment in harmony with room. Dado as part of wall decoration.

Center of interest in window view. Well-proportioned furniture and simple table decoration in keeping with furniture and room. See pp. 34, 163-168, 179-186.

Grace and delicacy of line in modern furniture of Hepplewhite design. Rich pattern and luster of polished mahogany. Interesting spacing of wall panels and door, rich draperies, and scenic wall paper. See pp. 196, 197.

11. Well-designed inexpensive painted furniture suitable with this cheerful cottage window. See pp. 37-49, 282-285.
12. Cupboards, extensive working space, light over sink, roll of paper towel ventilator above stove. See Ch. 6.
13. Broom closet, work cabinet, refrigerator, ceiling lights above sink and in middle of room, sink for dish-washing, stove, corner shelves to assist waitress. See Ch. 6.
14. Figured wall paper contrasted with plain draperies, bedspread, and rug. Enclosed radiator. Comfortable chair showing Victorian influence in design of back. Soft texture of cotton candlewick bedspreads. See pp. 46-48.
15. Harmony of line in window frames and furniture. Contrast between plain walls and figured draperies, upholstery, and bedspreads. Suit-cases, benches. Orderly effect gained when rug edges are parallel with walls and bed. See pp. 177, 184, 378.
16. Bed built into room. Pine knots are element of decoration in wood surface. Beauty of simplicity and harmony in decoration of furniture and bed cover. Advantage of shallow drawers.
17. Why the bedspread and pillows do not add to the good appearance of this room. Pattern of parquet floor and wood grain in furniture.
18. Harmony of modern built-in furniture with room, and separate chair. Translucent window glass. Interesting balancing of light and dark walls, desk chair, window with curtains, couch upholstery, pillows, a rug. Design of desk lamp. See p. 398.
19. Good design of Colonial chair, dresser, mirror, mending table, bed, a rag rug. The non-functional canopy ruffle, and side curtains of bed are reminiscent of curtains used for protection from cold and for privacy. See pp. 184, 194.
20. Easy-to-make dressing table with flounce of cotton and stripes of ribbon and braid. Closet boxes and other objects reflected in plain glass mirror. See pp. 37-43.
21. Game of chess on drop-leaf table, books, radio, magazines, books, football helmet, tennis racket, pennant suggest boy's interests. The pennant would look better hung straight, and tennis racket would be kept in frame and laid flat except for need to show it in photograph. See pp. 54, 55.
22. Enclosed shower, lighting, mirror door, medicine cabinet, towel rod at side of lavatory. See pp. 181, 257.
23. Hat boxes, clothes bag, dress hangers. See pp. 38, 206.

# 2

## HOME IMPROVEMENT

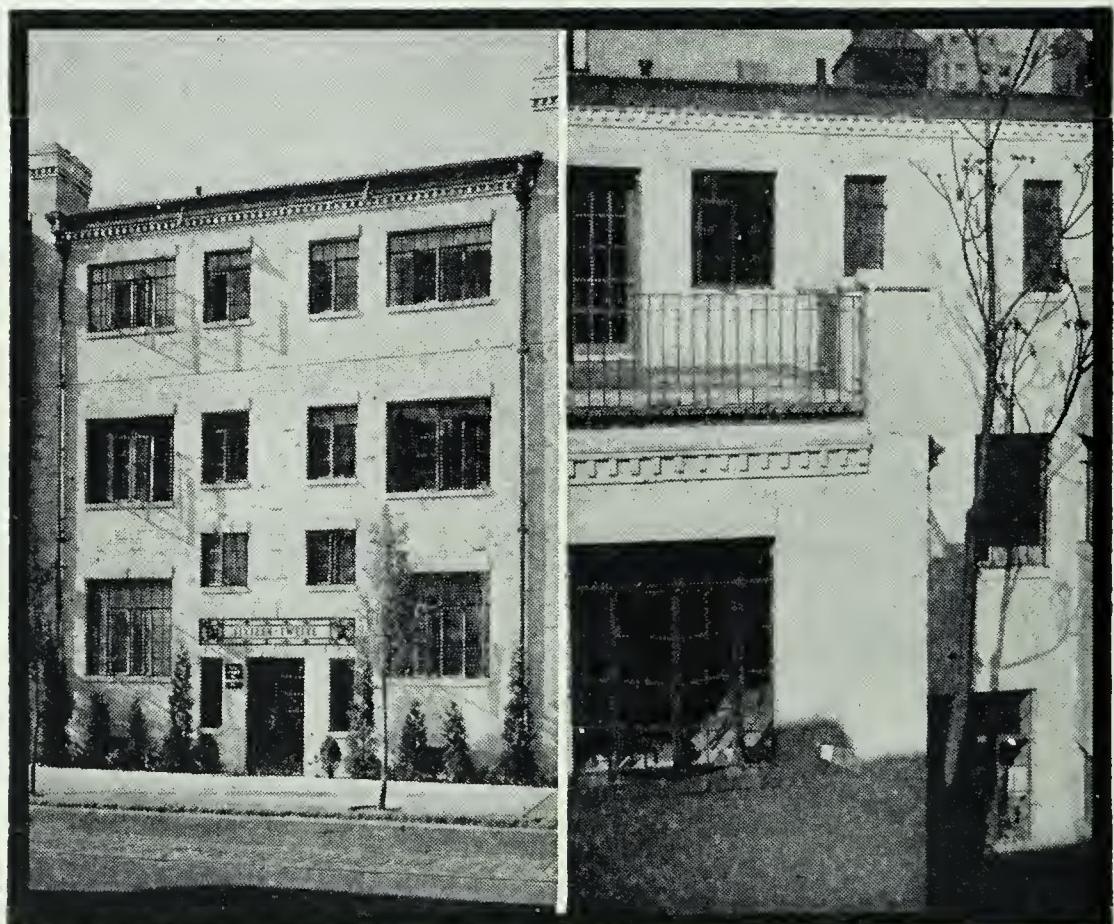
DETERIORATION is tearing down, destruction. Improvement is building up, and therefore a constructive process. Property and home deterioration goes on as a result of neglect as well as wilful destruction which means that those who are interested in being constructive must be alert and careful observers as well as inventive and often ingenious. The reward of improvement is the satisfaction that results from better living conditions. In the chapter you are about to read there are many suggestions for those who want to be constructive. They range from the simplest to the most elaborate. Among them you may find suggestions that are applicable to your particular situation. Other chapters of the book give more information and explanation about common problems of housing and should help those who start home-improvement projects to analyze situations and see how to effect worth-while changes.

But the really important question is not what particular change or addition for your home you decide upon but that you come to see the varied and extensive nature of home improvements. The few specific suggestions of these limited pages only indicate how you can keep constructively busy throughout a lifetime on housing. Home improvement is not completed with the making of some object or the finishing of a project. Instead, it is a continuously constructive process that calls for intelligence about building and living conditions.

As you read through this chapter you undoubtedly will be asking such questions as those on page 26.



Fig. 1A. The exterior of city houses before and after remodeling.



*Photographed by C. V. D. Hubbard.*



*Photographed by C. V. D. Hubbard.*

Fig. 1B. A back yard full of rubbish transformed into a sunny courtyard.



*Photographed by C. V. D. Hubbard.*

1. What could I do to my room to have it more as I want it? How could I create more privacy for study in my room?
2. What personal habits would I and other members of the family need to cultivate if a more coöperative spirit of house-keeping and home-making is to result?
3. How could the neighbors be made to see that they as well as others benefit from helping to keep up the good condition of the community?
4. Can a home improvement benefit one member of a family while working a hardship on others? Do community changes that benefit one member at the expense of others merit being classified as improvements?
5. How can one judge as to whether or not a change is an improvement?
6. Under what conditions will good new buildings result in but little improvement in living conditions?

Nature. The average family either never builds or buys a home. Those families who do usually look upon the investment as one to occur but once in a generation. Home improvement is different. Every one can improve his or her home. Improvement may be constant, going on in either a rented or owned apartment or house, from day to day and year to year according to the interests and imagination of the occupants.

Home improvements have the great advantage also of being quick in response to felt needs. It is a comparatively quick process to paint a piece of furniture, buy or make new furnishings, or even remodel some part of a house. To a large extent improvements are the same as upkeep and repair. It improves any home to keep it in repair, but many improvements are not repairs. They are additions and entirely new.

Improvements always represent a conscious effort to make living conditions better, and they usually express a rising standard of living. They may be as simple as coöperating in the process of good housekeeping or as complex as organizing the neighborhood with a view to zoning it for the protection of residential property. They may be as inexpensive as painting the pantry shelves; glueing, cleaning, and waxing a useful

piece of discarded old furniture; or as costly as completely replacing an old house. On a national scale improvements may call for demolishing unhealthful buildings and replacing them with safe and livable structures, or enacting legislation that enables individuals to make housing improvements for themselves.

**Home versus house improvement.** Home improvement is different from building improvement in that it involves a whole set of relationships and attitudes toward persons. They may be wholly social, involving only courtesy and constructive planning. Building improvements, on the other hand, can be limited just to repairing the foundation, walls, roof, or yard and may involve only structural consideration. A combination of both social and physical improvements occurs when group discussions and decisions precede structural changes, and these changes are made to improve the health, comfort, convenience or esthetic enjoyment.

**Coöperation.** A house or an apartment is the shelter within which persons associate. Family groups live formally or informally as is the established habit or pattern with them. In some families every member is taught to be thoughtful and highly considerate of the rights and wishes of all others, but in too many families a pattern of living develops that permits some members to accept the labor of others as their due. When one or two persons must be responsible for all the daily housekeeping and house repairs, irresponsible members live like guests in their own homes. Later when they assume responsibility for a home of their own they are likely to be shocked and disgruntled over the amount of time and money needed to keep it up.

In a home several parts of the building are used in common. There is a common living-room, dining-room, kitchen, bathroom, porch, and yard. Furniture and equipment are also used in common. Common use means that each person needs to know how to use it satisfactorily to himself and others. Types of courtesies become associated with the use of houses and furnishings. Consideration of others and courtesies prac-

tised in the home come to be reflected in the action of individuals away from home.

Enjoyment of and respect for your own possessions may help in learning to express respect for the rights and the possessions of others. However, an alert person does not need to own a house and yard to realize that the owner who spent his money and used his time to improve it resents having shrubbery torn, paths worn across his lawn, papers thrown about, and other damage done to the good appearance of his property. Coöperation in preserving the best qualities of possessions is true courtesy. Many acts not listed as manners will classify as courtesies.

Home improvements are of the widest variety, those in which every one can participate and those requiring skills of different kinds. Every one young and old can practise the courtesy of helping care for the home by maintaining neatness, order, and cleanliness. Redecorating walls, mending furniture, or remodeling a house calls for informations and skills that may take some time to acquire.

**Suggestions for household courtesies.** Expand the following suggestions on the basis of personal experience and group discussions:

Hang coats, hats, and the like, in closet, on costumer or hooks provided for the purpose, when coming into the house. Remove rubbers on porch or in vestibule and carry inside. If a cocoa or other mat is provided on the porch or in the entry, wipe the street mud or dirt from your shoes before stepping inside. Umbrellas should be stood in racks provided or opened to dry in a room with floors not harmed by water. In some households umbrellas are opened, inverted, and allowed to dry over the bath tub.

Teach children the courtesy of caring for their wraps by setting a good example for them to follow.

When finished with a newspaper or magazine, fold it and put in rack provided, on reading table or appropriate bookshelves. Never drop it on the floor beside your chair, or scatter it about over chairs. Newspaper ink rubs off easily and

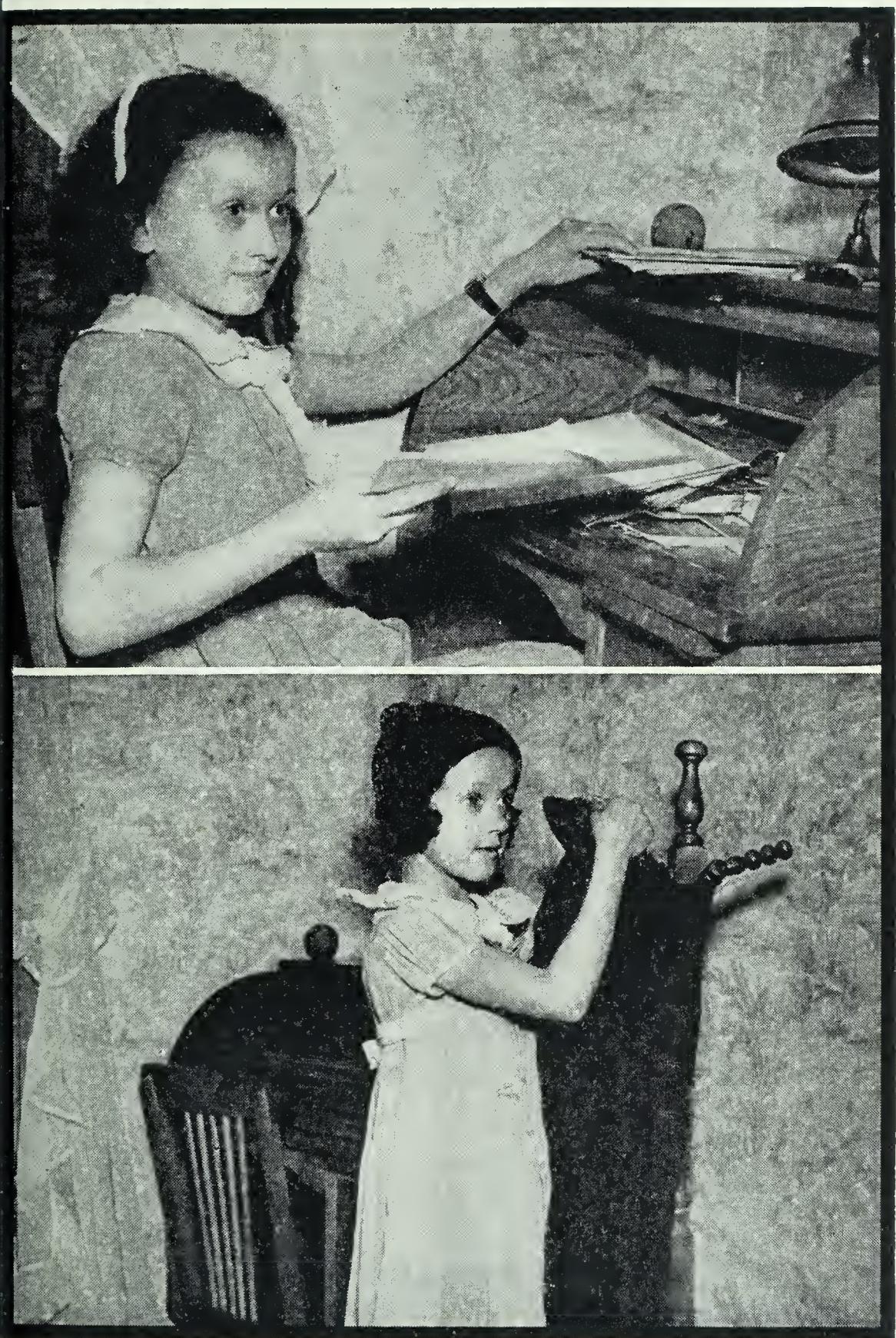


Fig. 2. Care of possessions should begin early.

dirties upholstery and rugs. Do not sit in chairs with your feet crossed under you, for by so doing you rub the dirt of your shoes onto the upholstery.

If you are a smoker, keep your ashes in trays and, if a member of the family, remember the courtesy of emptying and washing the trays.

If you disarrange the furniture of a room to play games, replace it when the party is ended.

Help to keep shades adjusted, doors closed, window blinds fastened open or shut so they cannot whip in the wind. Remember that shades at a variety of heights give a disorderly appearance from the outside as well as the inside. Except when needed to provide privacy while the house is lighted inside, or to protect from glaring sunlight, shades may be rolled completely out of sight. Shades are usually utilitarian rather than beautiful.

If you spill something and are a member of the family, clean up the mess. If a guest, offer to help clean it. You will probably need help in finding brooms, cloths, etc.

Learn to take care of your own possessions.

If you borrow a household possession, return it at the time you agreed upon and be sure that it is in good condition. If you have broken it, replace it or have it carefully mended. If you have marred it, have it refinished if possible. A sense of responsibility for borrowed possessions is a first principle of courtesy. If you borrow something you are not wholly familiar with using, ask to be shown how the owner uses and cares for it. Generous persons truly enjoy lending possessions, but very few enjoy having them returned broken or otherwise spoiled. Many persons would prefer to give an article away in the first place rather than lend it and have it returned in spoiled condition. Be sure your standards are as good as those of the person from whom you borrow.

If you have turned on the radio, remember to turn it off before leaving the room. Others may not enjoy the program left for them. Also programs change suddenly.

If there is a fireplace in your home, remember to help re-

plenish the wood or coal and keep the hearth clean. A screen always in place keeps the sparks from snapping out onto the rug or carpet. If you roast marshmallows or otherwise use and enjoy the fire, replace the screen and leave the hearth clean.

Remember to close doors without banging. Cultivate a graceful gait and avoid stamping as you walk.

If windows must be opened when it is windy, make certain that the curtains are so fastened that they will be neither wrinkled nor torn. Remember to close windows that you have opened before leaving the house or going to bed.

Always put furniture in place before going to bed. It helps to prevent accidents.

If you are not physically handicapped, assume responsibility for making your own bed unless you live in a household where more than one household worker is employed and where definite time is allowed for chambermaid work. When a guest, make your bed if staying for more than one night and, when planning to leave during the day, ask your hostess whether she prefers to have the bedding removed and folded or the covers turned back over the foot of the bed.

Avoid sprinkling powder over dressing tables, chairs, and rugs, and put combings in a waste-basket or other receptacle provided for the purpose.

Remember always to wash the tub and lavatory after using them. If a scouring powder is needed, be sure to rinse it thoroughly away, for when dried to enamel it leaves a rough sandpaper feeling.

Hang towels and bath mats neatly. Do not leave them looking as though you threw them while running in the opposite direction.

Never use towels or other toilet articles not your own. It is discourteous and unhygienic.

Help keep small bits of soap picked up.

If you are a shaver, do not leave soap and brushes standing about. Have a proper place for your equipment and keep it in place.

Never leave a wet wash-cloth rolled or knotted in the

bowl or tub. Dirty, damp cloths mildew and become foul smelling.

Remember that a shower curtain is not a towel. It will look fresh longer if you do not try to wipe your hands on it.

If the supply of toilet paper is about exhausted, and you are a member of the family, replenish it. If a guest, call your hostess' attention to the situation.

Help keep the kitchen clean by never leaving dirty dishes standing about or crumbs of food on shelves, tables, or stove. Cockroaches, ants, flies, and other pests are attracted by easily accessible food. It is better to avoid pests than to rid a house of them.

Empty and burn wrapped garbage frequently and always keep it in a tight metal container until burned unless there is an incinerator, in which case it is collected in the basement where burned. Never throw unwrapped garbage in a basket. If it is necessary to leave garbage soft for disposal, have a covered container in which to put it and keep the cover on constantly. Such a container should be frequently scrubbed.

When you have a cold, use soft paper or old cloths instead of handkerchiefs. They can be collected in paper bags and burned.

Assume responsibility for keeping the premises in order by helping to pick up scattered papers, sweep walks, rake yards, pick flowers, pull weeds, and cut grass.

Help to protect your neighbor's property. It is your view when you look from your own windows. You are a part of the neighborhood. Help to make it reflect to your credit.

Watch for and report needed house repairs such as loose aerial wires, torn shutters, leaf-clogged water spout, cracked windows, dead electric light bulbs, loose gates or fences, and the like. Take pride in the place where you live, whether you own it or not.

#### SUGGESTIONS FOR NEEDLE AND THREAD IMPROVEMENTS

**Windows.** Curtains are obvious needle and thread improvements for windows. In planning curtains, remember their

unctions. Curtains aid privacy by screening the view from outside, and they add beauty to the room either by preserving the good proportion of well-planned windows or by improving the proportion of those poorly planned. Also curtains may be the means of decorating an important area of the wall. When the colors used in curtains are well related to the colors of the room, they are a real asset. Study the series of illustrations on pages 165 and 360 to see (1) how curtains can be used to change the proportion of windows, (2) how curtains

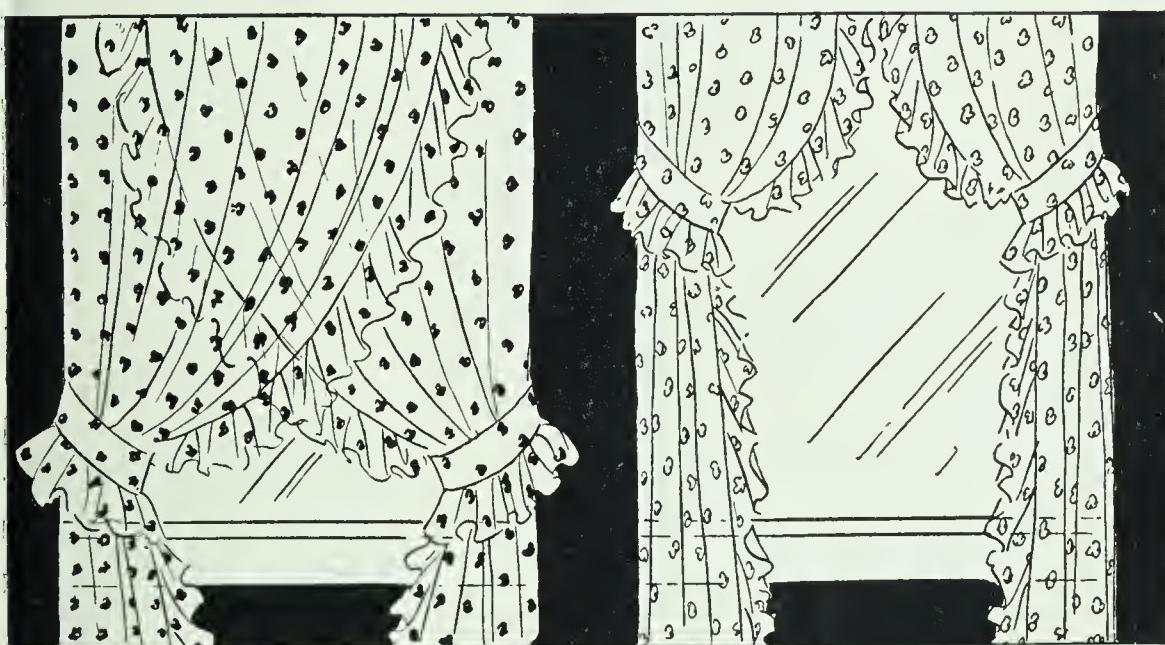


Fig. 3. The curtains at left are awkwardly draped and shut out light and view. Note the improvement of hanging in those at right.

may be used as a means of decorating important areas of the wall, and (3), how a window becomes a frame for a picture made by the garden. Such a window needs no curtains or but the simplest type of casement cloth to be drawn only for the sake of privacy.

Glass curtains are what the name implies, curtains of very sheer fabric hung over and close to the window-pane to give some privacy without darkness. They are made with simple hems at top and bottom. With glass curtains draperies are commonly used at the side of the window. Suitable fabrics for glass curtains are sheer cotton or rayon marquisette, nets

or fine voiles. Glass curtains do not change the proportion of windows: draperies may.

**Draperies.** A variety of fabrics are used for drapery purposes. Gingham, calico, chintz (dull and glazed), monk's cloth, and other heavy cottons and wool fabrics are suitable, wool being used only when a wiry quality is desirable. Heavy

rayons in plain, satin, and fancy weaves, and drapery velvets are also available for large rooms where richness is needed to harmonize with brocaded, velour, or other luxurious upholstery fabrics.

Perhaps the least costly fabric for which a multiplicity of uses has been found is plain thin muslin. It can be dyed to match color schemes and decorated with stencil patterns as shown in Figure 5 or threads drawn and yarns (either mercerized or wool) pulled through if a band of color is needed for the bottom. Theatrical gauze is sheer and among

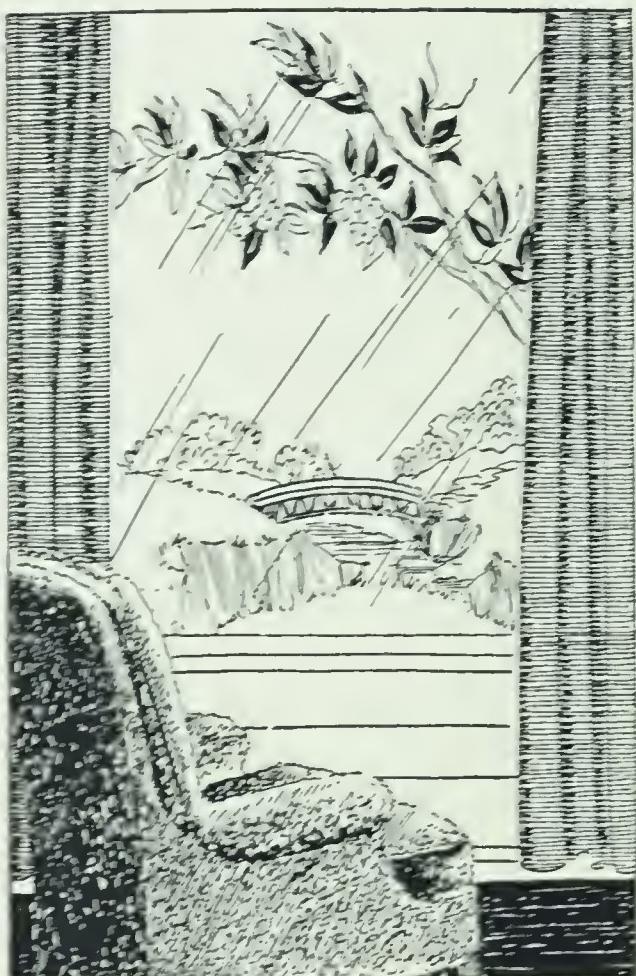


Fig. 4. Curtains that do not interfere with view and sunshine.

the inexpensive curtain fabrics. It is easy to handle in sewing but needs special care in laundering. In sunlight it rots easily, and its yarns are loosely woven so that they break and stretch out of shape in washing.

Cotton mull and dotted swiss make dainty curtains for small bedroom windows. When laundered with the addition of a small amount of starch, they can be kept looking fresh and crisp.

In planning window curtains keep in mind the use and care that will be required to keep them in good condition. City

Curtains are likely to need laundering or cleaning about once a month in winter whereas rural or suburban curtains may hang for six months or longer. If you must launder your own curtains, consider when planning them how much time you are willing to spend. If they are to be laundered commercially,

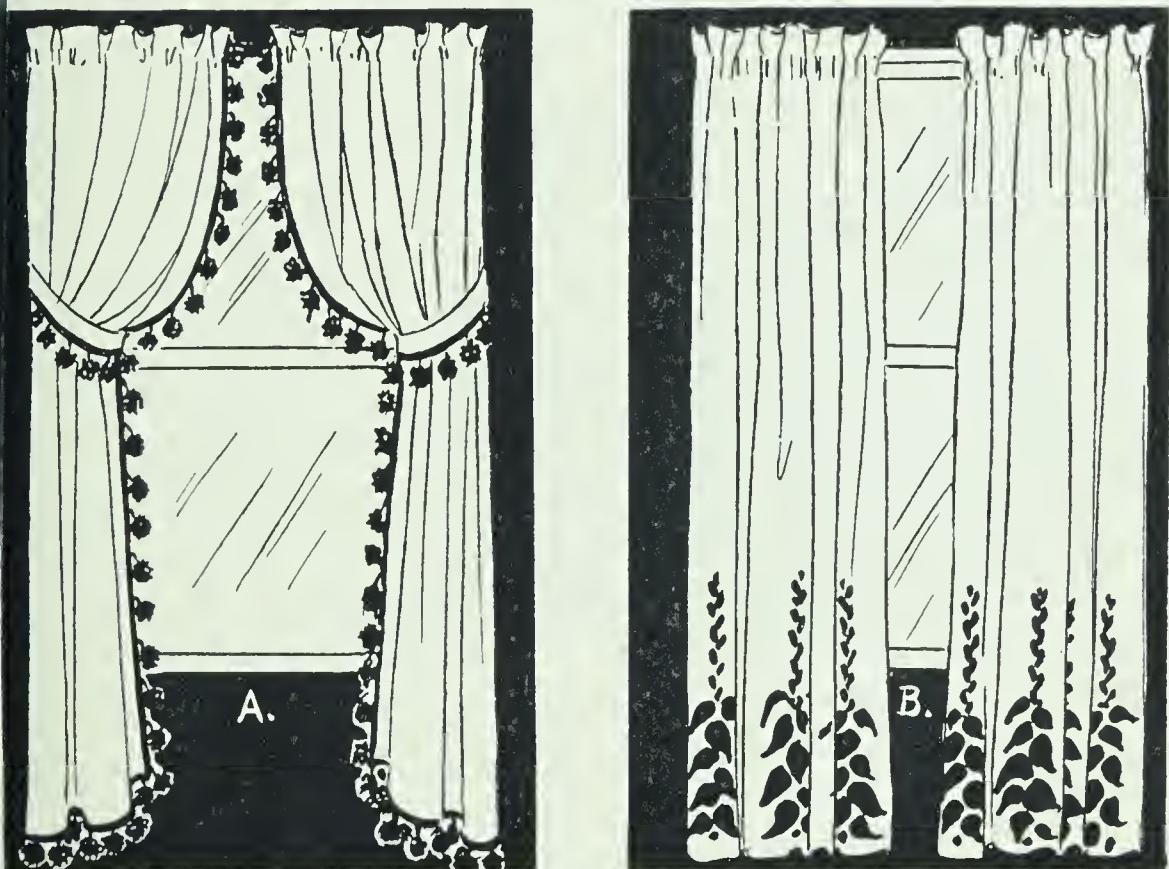


Fig. 5. Curtains of inexpensive muslin.

A. Edged with ball braid; B. Stenciled.

be sure to choose colors that do not fade easily and fabrics strong enough to withstand the type of washing given. Find out also the laundry charges for curtains of different types.

To figure the amount of material needed for curtains, be sure to take accurate measurements from the rod to just below the window frame and allow for hems at top and bottom. If draperies are to reach to the floor, measure accordingly. Allow one-quarter of an inch for the first turn of the hem. One to one and one-half inches will be enough for the second turn of a top hem to be used over a simple round curtain rod. Three inches can be allowed for the second turn

of the bottom hem. Remember to test a sample of the curtain fabric for shrinkage and allow accordingly when measuring for length.

Closet and wardrobe doors frequently require curtains. Though such curtains can be decorative when the door is so placed in the wall as to make it a center of interest, they more often should match the wall in color so that they may be inconspicuous. Obviously, this use of curtains calls for fabrics heavier in texture and less conspicuous in color than might be used at windows. Monk's cloth and abbey cloth are heavy cotton fabrics, neutral in color, that may be well used when the walls are cream to light tan and the woodwork painted light to match it. Costly cotton materials in neutral background but beautifully embroidered in wools are among the imported fabrics that make suitable door hangings.

To provide privacy curtains may be needed in broad doorways between living- and dining-rooms or to screen adjoining rooms from the hall. When lined draperies are used at windows, the same type can also be used for doorways, thus keeping the color scheme organized. Considerable judgment as to shrinkage is needed in selecting fabrics for lined draperies, and much skill is required to measure accurately and fit the lining and face fabric together. The making of lined curtains is skilled work. However, with careful planning the amateur seamstress can get acceptable results. If the face side of the curtain is to be made of a pile fabric such as velveteen or velvet and the lining is sateen or rayon, remember that there will be much puckering of fabrics unless they are carefully pinned, basted, and held taut during the stitching. In damp atmospheres unlike fabrics may shrink unevenly, thus puckering at the seams. Both fabrics ought to be pre-shrunk.

Remember to press curtains well before hanging.

Rayon, silk, and wool fabrics will scorch readily under a hot iron. They should be pressed with an iron just hot enough to smooth out the wrinkles and preferably under a slightly damp cotton cloth, or with a steam iron. Pile fabrics cannot be pressed on a board. When seams must be pressed, stretch

hem as shown in Figure 6 over an inverted hot iron, with the pile side up and a damp cloth between the iron and the wrong side of the velvet.

**Table, chair, and other covers.** The use of covers over tables, chairs, couches, davenports, or other types of furniture is to protect table tops and upholstery, but covers may improve the appearance of furniture also when selected for beauty as well as utility. Careful matching or planned contrasts of colors in relation to wall coverings, carpets, and rugs, as well as window hangings preserve unity and interest in a room. Dining-table covers are the background for china and should be chosen to enhance the beauty of it. For the person who plans to make table covers the problem is to decide what kind is needed, whether they

can be a leisure-time occupation, what will harmonize best in color, texture, and design, as well as how much they will cost. See pages 172-179 and the references on page 202 for a discussion of color. The following list suggests types of covers:

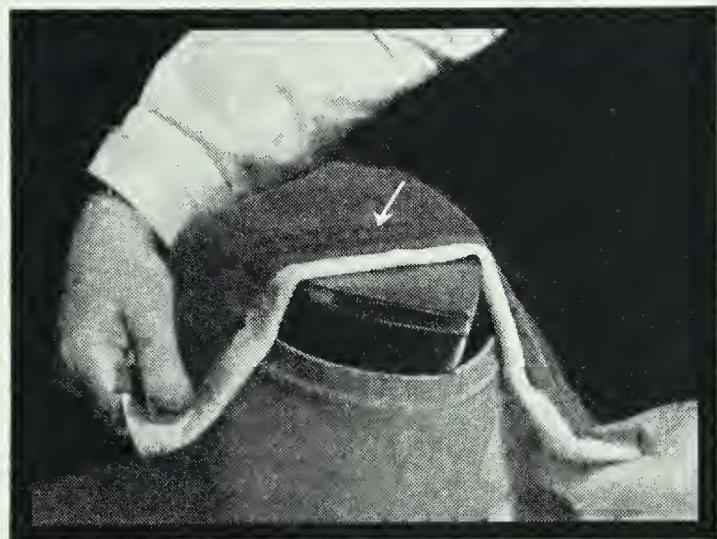


Fig. 6. Steam pressing of pile fabric.

Iron held by being inverted in can. Wet cloth over iron separates velvet from hot iron and furnishes steam to raise pile and open seam. Steam is faintly visible above the white arrow that points to the seam.

#### TABLE COVERS

- Dining ..... Damask dinner cloths with simple hem
- Embroiled linen luncheon cloths
- Lace doilies or luncheon cloths
- Luncheon doilies and runners (white and colored)

	Luncheon cloth for card-table service
	Oilcloth, breakfast doilies, oilcloth garden or picnic table cover
	Oilcloth cover for child's table
	Paper doilies
	Cork mats for luncheon use
<i>Living-room, . . . . .</i>	Hand loom rugs of colors suitable to room
<i>Halls,</i>	Oriental table rugs
<i>Libraries</i>	Soft wool or silk covers to fit shape of table top, quilted and bound
	Cretonne or other fabric to match draperies and shaped to table top with bound edges or other simple finish
	Felt to match wood color and cut to shape of table
<i>Kitchen . . . . .</i>	Removable oilcloth
	Linoleum glued to surface and varnished with spar varnish
	Plate glass cut to size of table top

### DRESSER COVERS

Covers for dressers, like curtains, are of wide variety. In planning covers study the room and furniture. Will a simple panel of the curtain fabric make the most suitable cover? Should the cover be near enough in color to the wood of the dresser so that it is an inconspicuous cover to protect the wood from powder spots of hand lotion, or marks of a hand mirror dropped too heavily? Natural colored linen toweling in coarse weaves can be used on light oak or maple to serve such a purpose. Glass tops are especially satisfactory since they are easily cleaned and do not spot as varnished or painted surfaces. If the wood of a dresser has beautiful grain, glass may be used directly over it. When dressing tables are improvised from old tables or boxes, the wood which will not have beauty can best be covered with oilcloth or glazed chintz of good design or a stenciled fabric can be made to fit the top. Glass can be cut to measure at a hardware or glass store. Use a paper pattern to fit the top exactly when having glass cut into shapes other than square or oblong.

### FURNITURE COVERS

Furniture covers are chiefly for protection, but they can be planned and made for decoration also, for there is a wide choice of beautiful and suitable cotton and linen fabrics. Though these fabrics are washable, they are better looking before being washed or shrunk; hence a custom has developed of making the covers without preshrinking the fabric. Labels are therefore used on commercially made covers warning customers to dry-clean rather than wash them. As washing is the most satisfactory way of cleansing cotton and linen fabrics, it is usually best in the long run to make covers of preshrunk color fast fabrics.

There is much variation of shape in pieces of furniture, hence there are no commercial patterns. Those who make furniture covers must (1) study the shape of chairs, stools, or couches; (2) decide how many and what pieces will be needed, remembering that fabrics are flat and furniture has curves and corners. (Fulling and pleating is needed to shape a flat piece of fabric over the curved surface of a chair arm or back and attach it in a seam to an adjoining piece.) After studying the shape, paper can be fitted to the several parts and cut for a pattern, or the fabric can be fitted on and cut, being sure to allow for seams. For beginning work choose a straight chair or stool as shown in Figure 7.

Bedspreads are numerous in kind. They are the decorative covering and protection of blankets, quilts, down puffs, or wool comforters. Figure 7A shows some of the most inexpensive type. These are unbleached muslin faced to the right side with small-figured calico. (Both muslin and calico should be dampened and ironed dry on the wrong side to shrink it before cutting and sewing.)

**General guides.** There are a number of general considerations for the person who plans needle and thread improvements. The following is a guide:

1. Look over the room or house to see what is most needed.
2. Look for articles of this type in stores or magazines.

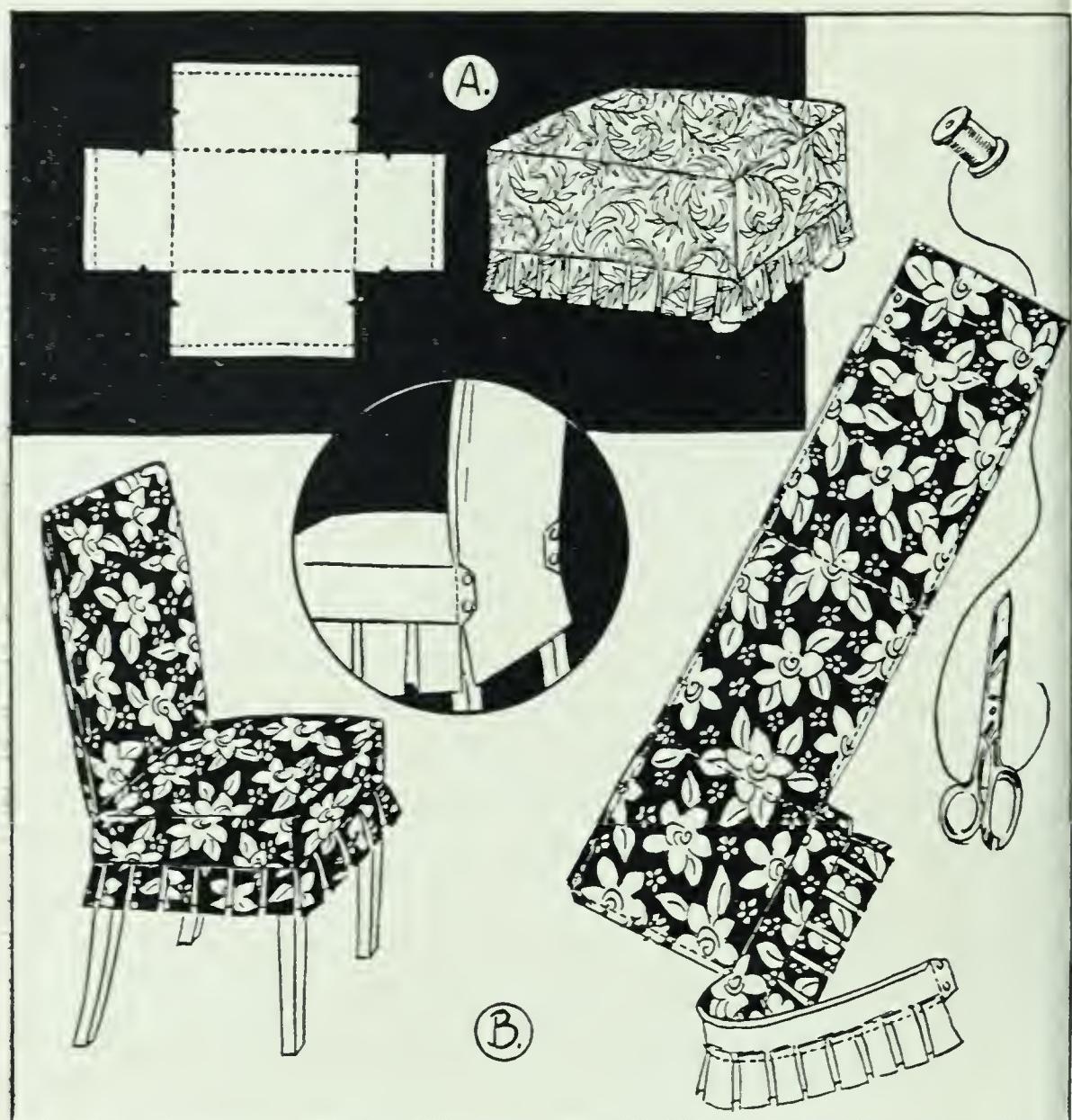
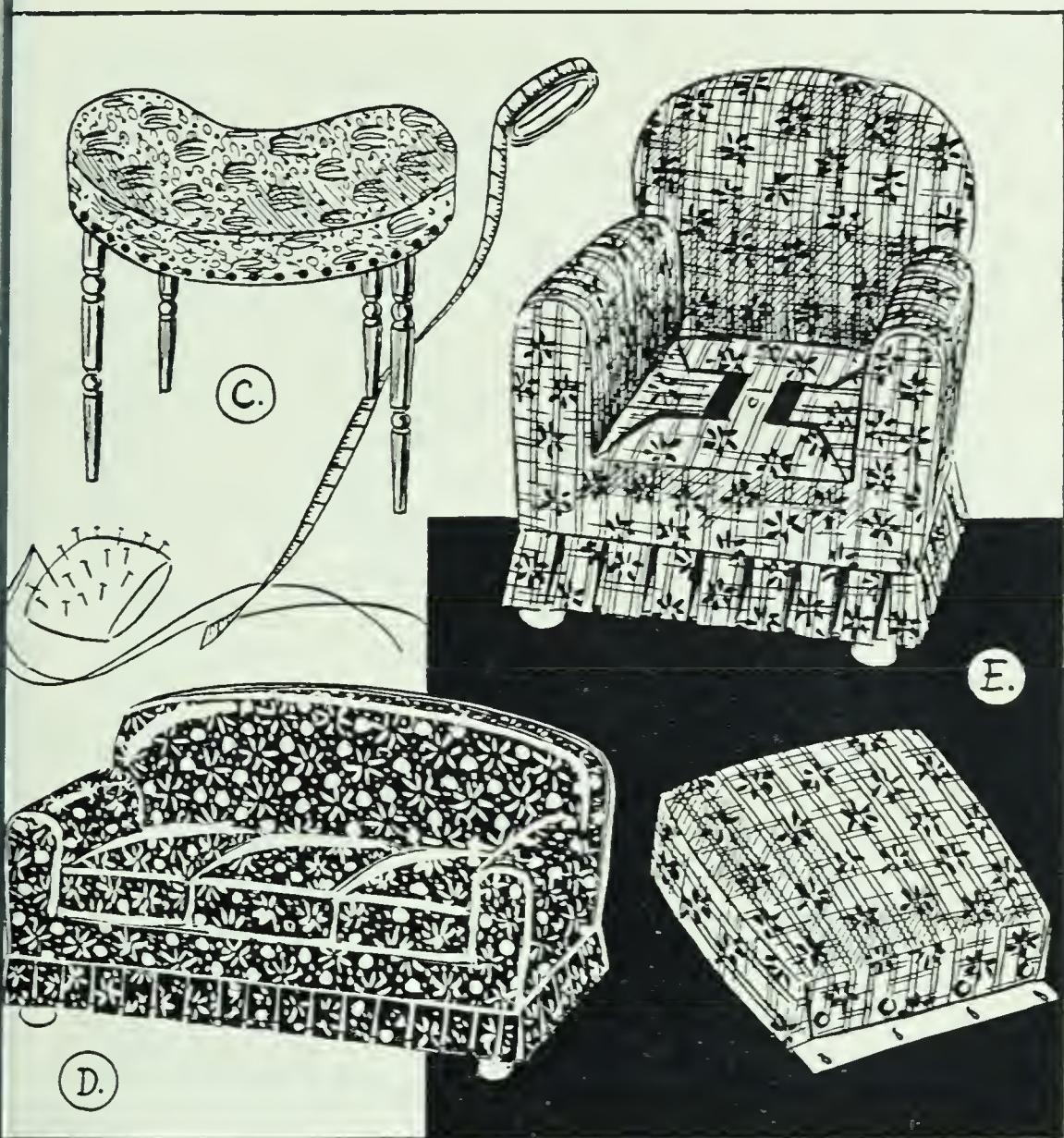


Fig. 7. Furniture covers both simple (A) and complicated (B).

3. Take account of the existing color scheme unless it is possible to completely re-do the room or house.

4. Consider the character of wear to be given. That is, if planning a bed cover, consider whether it is for a couch type of bed on which there will be lounging or whether it is a bed that no one uses during the day. Fabric that does not wrinkle easily and is either in a neutral color or small design and not rough enough to gather lint will serve for couch use. Wool and part wool fabrics are among those satisfactory for couch use. Plaid weave, light-weight cottons, linens, rayons, or silks are suitable for bedspreads.

5. Can the article you need be purchased ready made for ap-



Covers for bench (C), chair (E) and davenport (D).

roximately what it would cost to assemble the materials and make it? Can the materials assembled, that is, fabric, thread, binding, and the like, be used to make several needed improvements, thus reducing the proportionate cost of each?

6. Will the articles made be of better quality and fit better into the existing color scheme than any you might buy ready made?

7. To how great an extent can you make use of furniture or fabrics now on hand but not in use because they need repair?

8. What can you learn about desirable qualities in furnishing through actually making needed articles?

9. What experience will the improvement anticipated provide

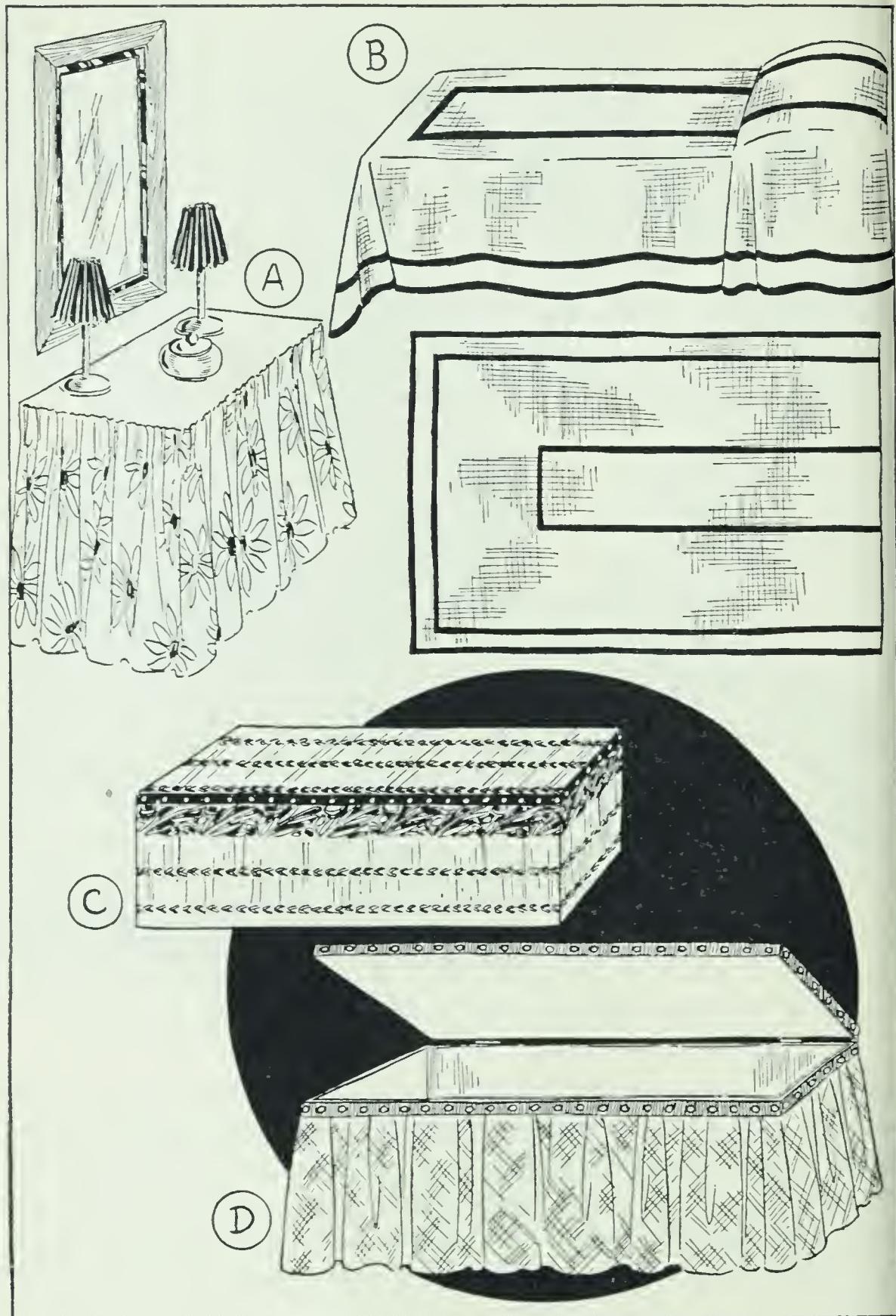


Fig. 7A. Several kinds of covers for use in a bedroom.

- A. Inexpensive dressing table; B. Inexpensive bed cover easy to make; C. Clothes box decorated with wall paper; D. Clothes box covered with a flounce of fabric.

or studying color matching and color harmonies? See Chapter on "Selection of Materials," pages 264-282, dealing with fabrics.

### RESURFACING

**Paint.** Many needed household improvements call for the use of paint, enamel, varnish, shellac, lacquer, or stain and wax. In other words, a new surface is needed. A surface does two very important things: (1) it gives a good appearance; 2) it protects the wood or other material that it covers. More people seem to be aware of the first purpose, perhaps because of the pleasure given by attractive color and freshness or change. The pleasure of surfacing materials is so largely the result of color, that thought should always be given to selecting colors for the sake of pleasure. Often circumstances force one to select colors that conceal defects, will not fade quickly, or can be cleaned satisfactorily. The happy solution to a home-improvement problem is to get beautiful colors that combine pleasingly with furnishings and also have qualities of durability.

**Transparent surfacing materials.** Shellac, varnish, stains, and wax are more or less transparent surface materials, and can be used where beautiful wood needs only to be protected. Shellac is commonly sold as both clear and orange. The clear shellac fills wood pores without staining it and gives a thin, smooth surface that will not absorb soot and other atmospheric dirt readily. Orange shellac changes the wood color. A gloss can be produced by rubbing wax onto shellacked surfaces.

Varnish should be used where more durable surfaces are needed. Some varnishes are clear; others carry stain that is taken on by the wood when the varnish is applied. Some varnishes water-spot easily and soften when hot objects are set on them. White marks appear.<sup>1</sup> Spar varnishes withstand washing and a considerable amount of heat. They give gloss

<sup>1</sup> Pat alcohol or camphor onto white varnish spots until the color comes back. This will soften the varnish. *Very light* rubbing or brushing may be needed to smooth a roughened surface. Allow to dry thoroughly and rub well with furniture polish and a soft flannel cloth.

and a durable finish suitable for table and dresser tops, floors, and other surfaces subject to the harder types of household wear.

Stains give color to woods without covering the beauty of the wood grain, but they afford little surface protection against the penetration of atmospheric dirt as does varnish or wax. Even where a dull-polish finish is required, some covering material other than stain must be used. If durability is to be considered, some other surface material such as shellac, varnish, or wax should be used.

**Opaque covers.** Paint, enamel, and lacquer cover wood grain: hence they should be used only when solid color without the show of wood grain is desirable. Occasionally when beautifully grained old wood trim in houses or the surface of furniture has been badly treated, nothing but an opaque cover can be used in resurfacing.

When planning household improvements, one should study the wood, linoleum, metal, brick, cement, or other material to be covered and decide whether it has qualities of beauty to be protected or whether the base should be concealed. There is no end of interesting possibilities in the use of paints both for the person who does the work and the one who studies them with a view to having furniture, rooms, and the outside of buildings resurfaced. In addition to the great variety of color in ready-mixed paints, there is the possibility of adding pigments when colors must be matched.

Paint can be used to cover the stains and mars of old wood-work and floors as well as new soft pine floors, the grain of which is not especially good. Painting also helps to prevent splintering, a characteristic of soft and brittle woods. Wood-work that has much handling by children, or persons with dirty hands, or on which food may be spilled, needs frequent washing with soap, and hence should be heavily covered with enamel, lacquer, or spar varnish. Paint for kitchen or bare dining-room floors where scrubbing is needed, should be the most durable variety of floor paint. The wear is light on bedroom floors with rugs, especially when bed casters are set

n wood or glass cups and soft-soled bedroom slippers are worn. Ordinary paint may be quite satisfactory. In fact, it often is the best cover where it is important to have the floor color in harmony with the room decorations.

Though it is not essential to varnish linoleum, many persons find that two or three coats of spar varnish over floor linoleum or linoleum used for kitchen-table tops or shelves prevent staining.<sup>2</sup> Varnish fills the pores and gives a surface that can be well cleaned. It affects a great saving of wear on floors near doors, stove, tables, and sink where walking is most frequent. Since it is softer than tile, dishes do not nick and break as easily when dropped on linoleum. Tile is, however, more durable and is made in beautiful colors and designs. Moreover, tile floor corners like cement can be rounded to facilitate cleaning.

Table tops to be used for serving may be lacquered or, if the wood has beauty, covered with spar varnish. Old walnut can be rubbed several times with boiled linseed oil and polished with furniture wax. Linseed oil so used gives a richness of wood color greatly prized by many. Constant waxing gives smoothness without high gloss. Table tops so treated may be washed with soap and water, if not allowed to remain wet longer than is necessary to take off a spot of food or atmospheric dirt, and immediately rubbed with furniture wax after washing.

**Choice of materials.** In deciding what covering to use, consider the results to be obtained. Is color that harmonizes with room furnishings of first importance, or is texture more important than color? If so, stain and wax that preserve wood beauty may be the proper surfacing material.

It is important also to decide how much labor will be involved, and whether or not the person to do the work understands the proper handling of his materials. A good paint job

<sup>2</sup> Linoleum when used to resurface tables or shelves needs to be securely glued to the wood with furniture glue. Be sure linoleum is scrubbed thoroughly clean, is dry, and has no stains or blemishes before covering with varnish. Allow varnish to harden thoroughly before using surface.

is preferable to poor lacquer work and paint is easier to handle than lacquer. If it is known that changes in color may be desired from year to year, less costly materials that are easily applied may be more desirable. Calcimine is inexpensive. It is mixed with water, is comparatively quick to apply, and dries within two or three hours. It comes in a variety of colors and, though not as durable as paint, is satisfactory on plastered walls where changes must be made frequently and the cost of material is a consideration. Surprisingly good effects can be secured when calcimine is well applied, for skilful workmen can color it to almost any shade desired, and the surface obtained is dull with much the same texture as plain wall paper. Frequently walls must be sized with a special sizing solution for level results. Unfortunately, the colors of calcimine fade in sunlight. Compared with paint, wall paper, canvassed walls, or wood veneer, it is at the bottom of the list in cost. Its best use is in bedrooms, on ceilings, walls above wainscoting, or other places where wear is comparatively light.

Painted walls are more costly and also more durable since they can be cleaned by washing with soap and water. Wall paints are both glossy and dull and of course have a wide range of color possibilities. The colors of good paints fade very slowly so that a color well chosen may give pleasure for several years. Paint is used over plastered walls, but enamel is not commonly so used. Enamel is costly as a material, requires much skill and time to apply well, and produces a glossy surface not often desirable over an entire wall. It is most appropriate on kitchen and bathroom walls. Artistic use of enamel in libraries, halls, and other rooms with broken wall areas, is possible.

Paper as a wall surface is so commonly used that infinite variety in color, design, texture, and durability has been developed. The price range is from a few cents per roll to several dollars. Wall paper suitable for any room of a house may be had. Unfortunately, wall papers must be chosen from sample books where the sample may be too small to show an entire design and one can never judge the effect it will produce in a

oom. If it were always possible to have colored illustrations showing rooms on which each of the papers is used, there might be less difficulty in choosing.

Small design in an all-over pattern of much the same hue but of slightly different value from that of the paper background gives a richness of texture without emphasizing design.

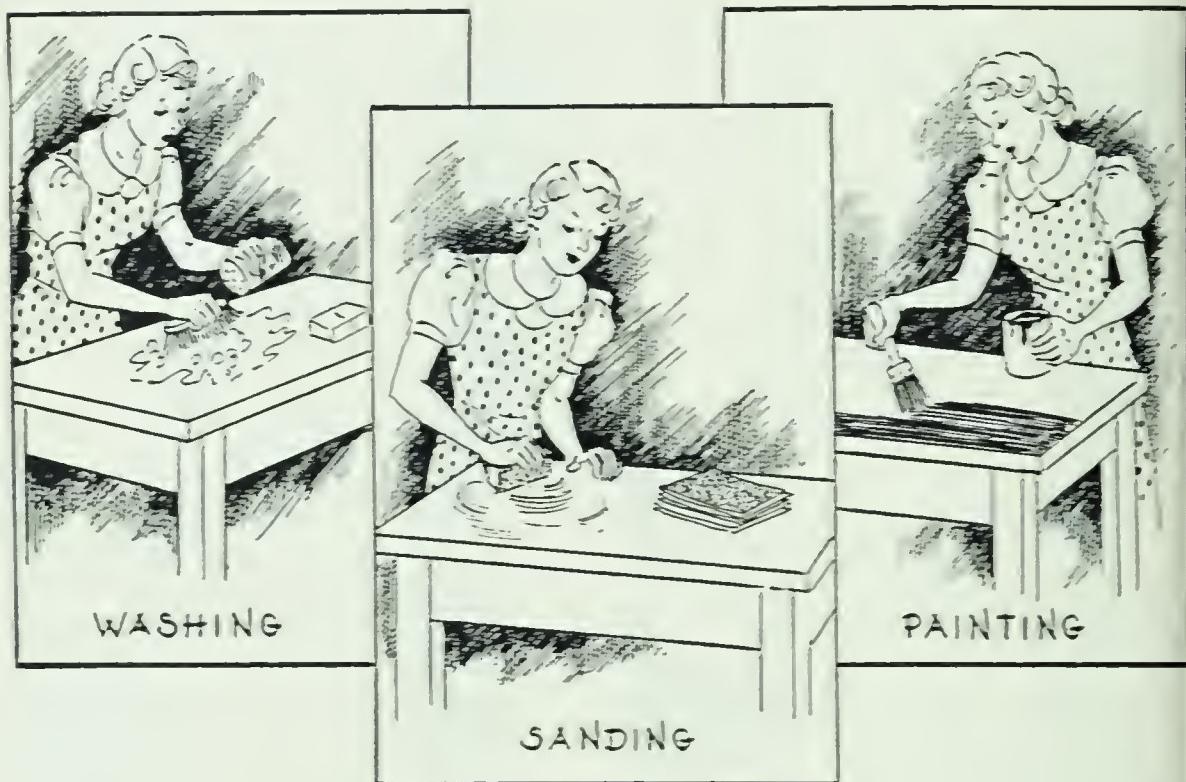


Fig. 8. Choosing a wall paper.

Unroll a length of paper and with clips or thumbtacks fasten to the wall where it can be seen with draperies, floor covering, and furniture. Test harmony of colors under both natural and artificial light.

Such papers can be successfully used in rooms where pictures are to be hung. Papers of large separate designs should be reserved for large wall areas not otherwise decorated. When properly applied to the wall, canvas has the advantage of having rich texture and durability, but the initial cost is high as compared to most wall papers. With restarching it can be freshened from time to time. Plaster walls are also hand-painted in designs to fit them, but this is a costly decoration.

Beautiful wood veneers as wall covers are likewise costly. For halls, large living-rooms, libraries, or other formal rooms where rich furnishings can be used, wood is a highly desirable wall covering. Usually such a wall lasts during the entire lifetime of a building. Figures of Chapter 5 furnish a variety of wall coverings.



#### REMINDERS AND SUGGESTIONS

Specific directions for the use of paints may be secured when they are purchased. In addition to the specific directions, remember to:

Have surfaces clean, dry and smooth. Never paint over a surface that has once been waxed without first scrubbing off all the wax and drying.

If nailing, glueing, puttying, or other mending is needed, be sure to do it before starting to paint.

If new wood is to be painted, examine to see whether it needs a filler.

If a surface is covered with old paint that is cracked or chipped sandpaper it to make it smooth. A blow torch is sometimes needed for large house jobs.

Use new or well-cleaned brushes. Select brushes of a suitable width for the work to be done.

Have plenty of clean, soft cloths available for wiping spots and cleaning edges where unwanted drops may accumulate.

Have paint mixed thoroughly before beginning work. If there are lumps that cannot be stirred out, strain the paint through a piece of wire fly screen or coarse cheese cloth.

Have a jar of turpentine or kerosene available for cleaning spots off paints, hands, and brushes. Be sure to keep away from fire. Banana oil instead of turpentine is needed when working with lacquers.

Work over a thick layer of papers or canvas.

Choose a dry day and avoid working if the atmosphere is full of dust or insects.

Have good circulation of air in the room and plenty of light.

Results are better when several thin layers of paint are used to cover a surface because a heavy layer is likely to be uneven. Learn to use long, even strokes and spread paint smoothly by brushing. Brush as rapidly as consistent with good work. Avoid spattering. One should avoid brushing varnish or enamel. By flowing varnish from the end of a brush it can be spread evenly.

It is especially important that lacquer should be spread rapidly because it dries quickly. Some vacuum cleaners have spray attachments that give beautifully even results, but one needs a workroom or suitable outdoor space for its use.

Be sure the first coat is thoroughly dry before applying the second. A foundation coat of flat paint should be used when enameling. For a smooth well-covered surface several coats of enamel are needed.

Cover paint cans tightly, clean brushes on paper or old cloths, and put them to soak in turpentine or kerosene when you have finished a job. If lacquer has been used, soak in banana oil after rubbing out excess lacquer on papers and cloths. If brushes are not to be used again for some time, work out remaining paint, after soaking, on paper or cloths; wash in warm soapy water; and hang, bristles down, to dry.

#### CARPENTRY IMPROVEMENTS

Carpentry improvements about a home depend upon one's ability to use tools, whether or not one can have a workroom with tools, and upon one's inclinations. The possibilities are

extensive. The simplest consist of such improvements as hooks for clothes hangers; shelves in closet, pantry, or basement; drop-leaf wall shelf for work surface or serving simple meal. Tacking label pulls on drawers, putting smooth metal tips on bottom of chair legs to permit easy sliding, and so on, are other equally simple hammer-and-nail jobs. The list may be increased to include elaborate jobs, such as making a recipe box, magazine rack, towel racks, stools, radiator covers, tables, beds, desks, and even upholstered chairs. Removing partitions, hanging doors, making and hanging storm windows and doors, remodeling porches or the entire house, are suggestive of the unlimited possibilities.

There are certain questions to be considered when planning to make use of one's own carpentry ability or employ others to do a job. As in the case of the previously discussed types of improvements, consideration of the existing conditions are of first importance. What within the range of possibility is most needed? How far is one likely to be able to go in carrying out desirable improvements? That is, will all the changes be possible at once, if an entire room should need redoing? Is it necessary to redecorate the walls and add one piece of furniture each season, or will it be possible to add everything at once? In any case a plan is needed that takes into consideration the woodwork and wall covering of the room, wood used in furniture, kinds of woods available, cost, ease of working wood. In an old house of varnished oak trim, one might find that maple or painted furniture combines best so far as appearance is concerned. In a room with painted or enameled woodwork, walnut, mahogany, or dark-stained wood might be best because of wood color and beautiful grain. Furniture design and proportion must also be considered in relation to the walls and the use to be made of the room. A room of heavy beamed ceilings, wood paneling, stone fireplace, recessed windows, suggests rugged massive design in chairs, tables, wood boxes, etc. Sturdily designed pieces in oak would fit the feeling of the room. A room such as that of Figure 8, Chapter 5, is so radically different in character that a heavy

piece of oak furniture would be definitely out of place in it.

Good planning takes into consideration comfort in use and those subtle qualities of good proportion and graceful lines that distinguish furniture as artistically planned and built. The subtle curves of a chair back make for both. The size and degree of tapering in chair legs may be the tell-tale mark of professional workmanship. Not only measurements but accurate observation and feeling for correctness are needed in skilful work.

Design is both a structural element and a part of decoration. A chair is well designed when the relation of its parts contribute to unity. The back fits the seat, and the legs are a perfect base for the seat and back. If the legs curve, they need to be so designed as to give a feeling of support for the whole. Applied decorations, on the other hand, are additions to the structural design. Applied decoration can be carving, inlay, nail heads, painted designs, moldings, metal trims such as drawer pulls, and the like. It is at once obvious that applied decoration is chiefly for beauty; hence the utmost care is needed to make carving in proper scale, nail heads of right size and color for both furniture wood and upholstery. So, too, with moldings and metal trims. For example, moldings should not give a feeling of top heaviness, and metal trims should be subordinated to the furniture they are to adorn. It is better to have too little rather than too much decoration. A piece of furniture of beautiful wood in which the parts are well related to the whole has beauty without the application of trimming. Beauty of wood and structural design can be stressed.

Splint weaving and caning are means of putting old furniture in repair and decorating some types of new. The bibliography lists bulletins and magazine articles that give specific directions for caning and splint weaving.



## NATURE OF HOME IMPROVEMENTS

**Survey needs.** If you want to make improvements in your home, study the possibilities. Surveying logically precedes planning. In making a survey look about and take stock of existing conditions. You might say, more emphasis upon co-operation in keeping order is the most immediately needed improvement at home, or, as one high-school girl did, "I should like a room of my own. From my point of view that is the most needed improvement in my home at the present time." Seeing this need, she discussed it at home and was given permission to demonstrate what she could do. A second-floor room used for storage had two good windows and could be heated in winter, but the walls were dirty, the woodwork needed painting, and a new place would be necessary for storage if she took this room. With the exception of a rug, curtains, and comfortable chair, there were furnishings enough in the attic. They needed some renovating, but the joy of having a room of her own seemed worth all the work involved. The drawing (Fig. 9) was made from her home-economics teacher's description of her project.

**Privacy.** A boy whose home offered less privacy than he wanted because he shared his room with a young brother, found his solution in making a double-decker bed with a ladder at the foot that his young brother "just loved to climb." This stopped the arguments about right number of covers and kicking while asleep. An old cedar chest with a sliding tray in need of repairs was put in order to provide an easily accessible place for the young brother's clothes. This ended the common use of dresser drawers with the younger brother who had often annoyed him by dumping toys into the drawers on top of his clean shirts.

**Sanitation.** A very universal need in rural homes and camps where running water and bathrooms cannot be afforded is sanitary and structurally safe privies. If set above ground without cement foundations, they must be screened to keep out flies and sometimes rats and mice. Screens are needed also



Fig. 9. A high-school girl's home project.

over ventilators in windows, ceiling, or doors. Doors should always be kept closed. Chloride of lime can be regularly sprinkled into the pit. Since privies are rarely decorative structures, hedges of high shrubbery as a screen are a distinct improvement. Occasionally when moving a privy it is possible to relocate it so that a fence or other building screens it from house and road view.

**Recreation.** An apartment building where there was need of winter play space for young children had a back yard that could be flooded for skating as shown in the next illustration.

An apartment building with unused basement rooms and a

number of families with children for whom the building offered no play space was improved through the initiative of one tenant family who saw the possibilities. The father talked to several of the parents about making play rooms in the basement. Some were not interested in contributing either labor or money. Three or four families thought it worth while.

When the owner of the building was approached, he had

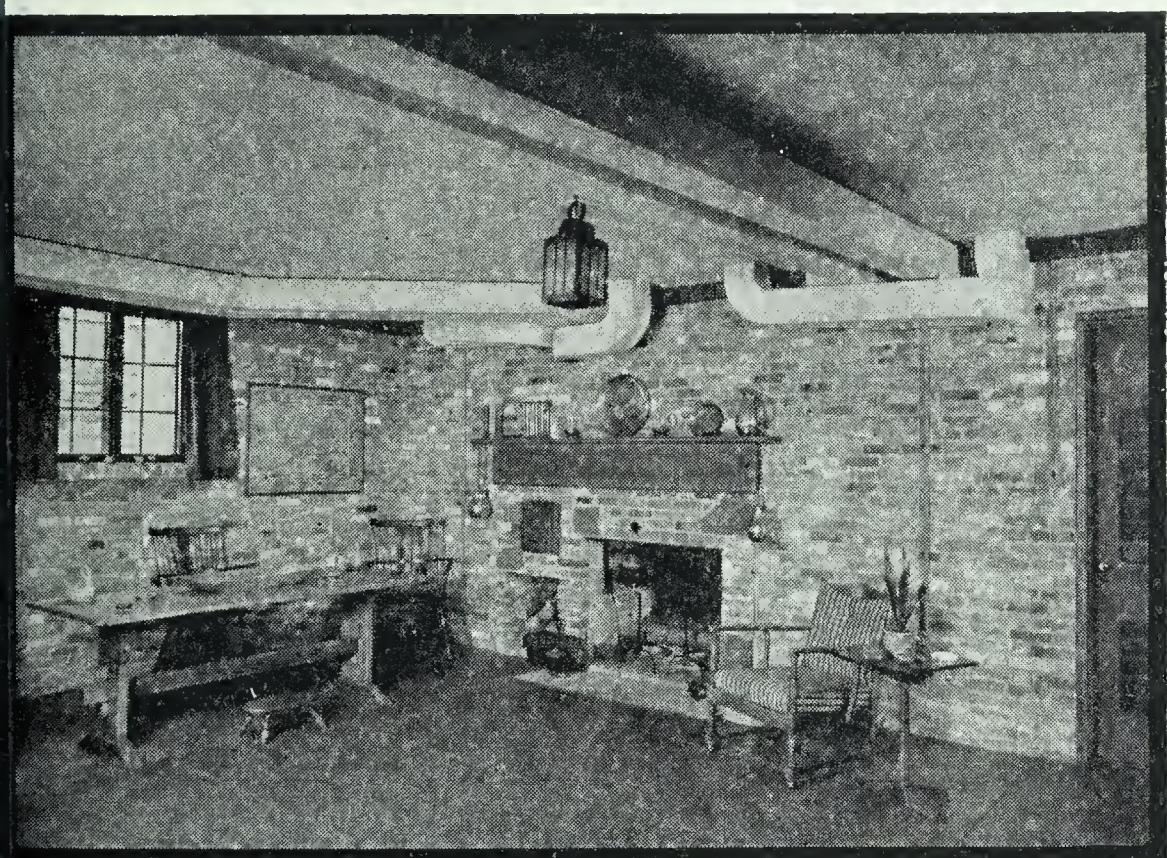


*Chicago Daily News Photo.*

Fig. 10. An apartment backyard improved for play.

no objection to improving the rooms for such use, but said he could go no further in helping than to supply the paint, boards, nails, or such materials as would become a permanent part of the building. One room was selected in which to start the work, and it was agreed that the families who shared should have exclusive use of the room. A lock and keys were provided, and a rotating plan of responsibility for care was worked out at the same time that plans were made for its improvement. The two families with little children were to use it during the morning, and the mothers agreed to take

urns in being responsible for straightening it up when the children left for lunch and their naps. One woman who was a member of a sewing club found it convenient to use this room on Wednesday afternoons when her club met. This was a regularly scheduled use of the room. Because the room was under her own apartment another woman with musical interests arranged for a regular piano practice period. She ex-



Photograph by Samuel Gottscho.

Fig. 11. An unused basement furnished as a recreation room.

The brick walls make a good background for the straight-line table, Windsor chairs, lantern, candle molds, pewter plates and pitchers on the fireplace mantle.

ained that she felt freer to work on her music where it was possible for other tenants to hear her. A high-school girl found it a quiet place for study, and some of the families enjoyed it as a pleasant place to meet in the evening for games. It was agreed that if a family wanted guests, they could speak to the chairman of the game room and sign for me in order that other members of the group might respect their right to privacy for the time in use.

**Community project.** In a community where most of the families of the neighborhood had lost interest in trying to keep up their homes, one citizen set himself the task of improving the situation. He began by talking to property owners about the possibilities. A few were community-minded; others were interested only in so far as improvements would make their property more salable. Several tenants showed as sincere an interest as owners, and through them the leader succeeded in getting other persons to join and organize for definite work.

The immediate problem was how to prevent industrializing the neighborhood. Nature had given them a beautiful hill near a river. Coal in this hill was more easily accessible from the residential side. To run a coal shaft out onto one of the streets would at once deteriorate all the property for blocks about, and to use the river at this point for loading coal would interfere with its use for pleasure purposes. Zoning was needed to protect property for residential use. To secure zoning would necessitate organizing the community, presenting the situation, and beginning a campaign. The meaning and value of zoning would need to be explained and a program outlined for those who were willing to work on committees. Since all citizens could not be expected to attend the meetings called, persons would be needed for home visiting and writing explanatory letters. The best information and arguments were essential for they would be approaching citizens with too little interest to attend a meeting. Because first enthusiasms could be expected to die, a regular program of follow-up activity was planned from the outset to keep interest alive until the desired results were attained. The self-appointed originator of this work knew full well what might be necessary, but he considered the protection and improvement of the neighborhood worth the effort.

**Individual responsibility.** A professional woman with a daughter of junior high-school age moved from one neighborhood of a large city to another in order to be near her work. The street on which she took an apartment was represented

to her as a quiet one of families. A few weeks after moving to the new home her daughter received a telephone call from a strange man who said he lived across the street and would like to take her for a ride and to dinner. When she asked his name, he said that it made no difference. Obviously she did not accept the invitation. Since it had always been her habit to discuss her social problems freely with her mother, she repeated the telephone conversation at dinner that evening. Both she and her mother considered it strange that a neighbor who refused to give his name should for no apparent reason telephone to invite her to ride and go to dinner. Two days later, shortly after the daughter had returned from school, the invitation was repeated. This time the voice came through the speaking tube, and the "neighbor" said he had come to take the daughter riding.

With the second of such unsolicited invitations both the daughter and mother were frightened. The mother began a series of inquiries and found that two apartments, one across the street and one two doors to the west were being run as houses of prostitution. Assuming that the officials of her city were interested in protecting families, the mother called upon the chief of police to ask for better neighborhood protection. The chief was courteous, but nothing was done about the nuisance in the neighborhood, and unwelcome invitations continued to come to the daughter. Then the mother went to call upon the mayor, but found it impossible to get beyond a polite secretary who was greatly surprised to hear complaints about his "residential neighborhood." After several unsuccessful attempts to reach the mayor, the mother learned that the houses of prostitution were secretly paying for protection and that either it would be necessary to move or to secure the aid of some organized group that would have political power enough to demand and get better neighborhood regulations and special policing. Since she was employed in work that called for most of her time and energy, it was a discouraging problem to face. Had the neighborhood been zoned for family residences and honest enforcement of government possible,

such individual responsibility would have been unnecessary. Under the circumstances private initiative was needed to start a campaign for neighborhood improvement.

**Large scale projects.** Home improvement takes the widest variety of forms from the simplest of repair jobs to the more complicated social problems of organizing small or large groups

to effect better living conditions within the household, the apartment building, or the community.

Home improvement goes on extensively when great philanthropies or government agencies assume responsibility for housing projects. Because of years of neglect, housing in the United States was in a particularly bad condition at the close of the World War. By 1930 the problem had become acute enough to attract national attention, and housing was one of



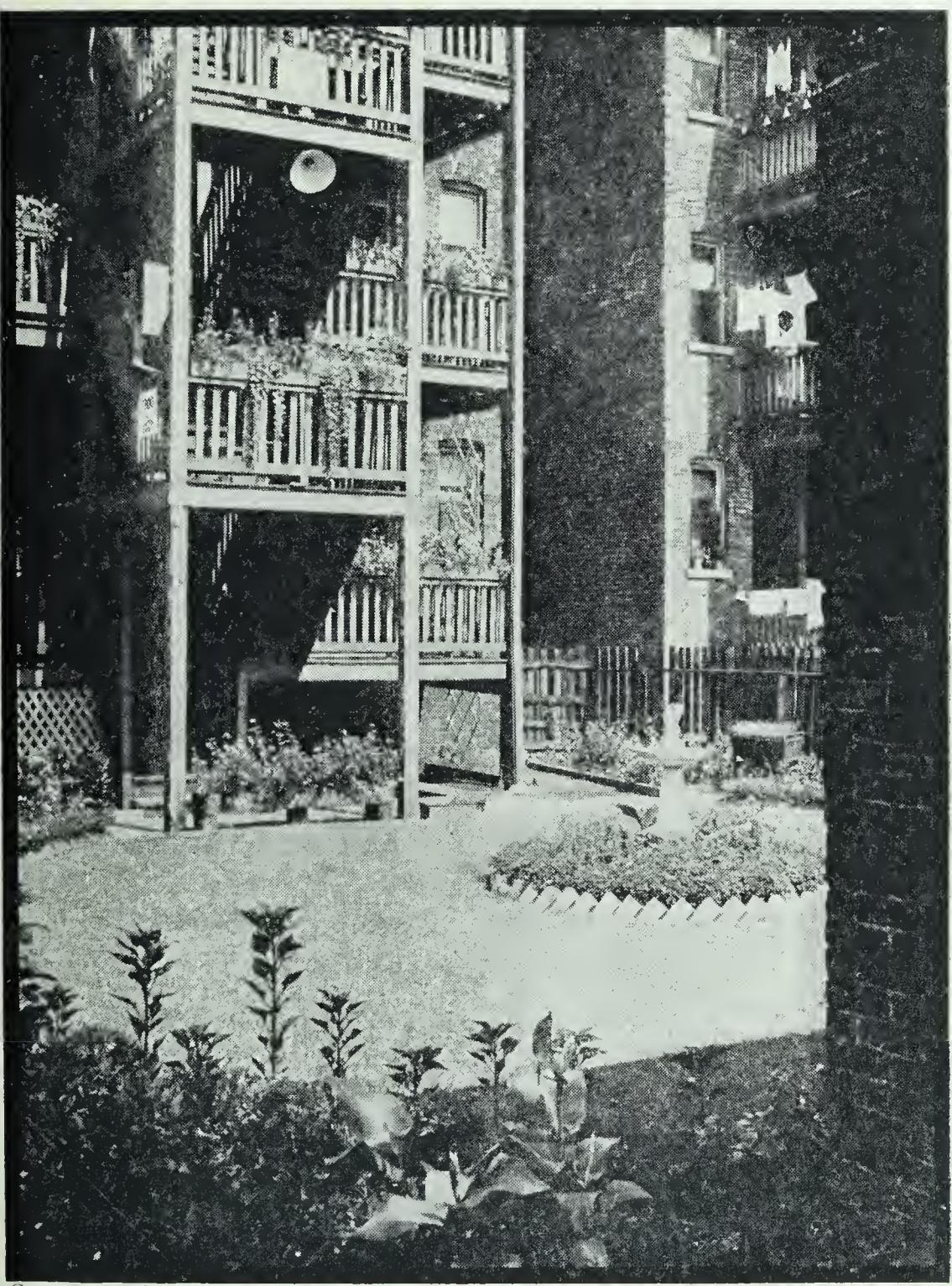
*Courtesy of "House Beautiful."*

Fig. 12. Improvement of the yard makes outdoor eating possible.

the subjects selected for study at the White House Conference. The financial depression created a serious need for employment and<sup>3</sup>

The Federal Housing Administration was created by "an Act to encourage improvement in housing standards and conditions, to provide a system of mutual mortgage insurance, and for other

<sup>3</sup> Federal Housing Administration, Mutual Mortgage Insurance, Regulations under Title II of the National Housing Act (Washington, D. C., November, 1934). Mimeographed.



*Courtesy of the Chicago Rapid Transit Company.*

**Fig. 13. City gardens.**

An unusual project for civic beautification is the annual 'L' Garden Contest in Chicago when residents are stimulated to clean up the surrounding premises and develop gardens of all types. The above picture shows a typical apartment building display developed for the contest. Without improvement these yards are bleak, unsanitary, and of no pleasure to the tenants.

purposes," approved June 27, 1934, which may be cited as the "National Housing Act."... Title I of the National Housing Act—housing renovation and modernization—provides for a program designed to stimulate immediate activity in the fields of repair and modernization of existing properties, and thus to relieve unemployment in the building trades and associated industries. But, while the accumulation of needed repairs and improvements upon real property is large, activity in this field alone cannot be expected to support the building industry continually throughout the years to come. The revival of new construction must be brought about as well, if the building industry is to keep pace with other forms of economic activity.

A multiplicity of agencies through which housing projects may be carried on or money loaned for repair, remodeling or new construction have sprung up.

The Act was amended in 1937, and within its provisions the United States Housing Authority has been created as "a body corporate of perpetual duration."<sup>4</sup>

Under the Act all slum-clearance and low-rent housing programs must be initiated by the localities themselves. The United States Housing Authority simply acts as banker. It provides advice, technical assistance and finally funds after the requirements set forth in the law have been met by the applicants for a loan.

It cannot be too strongly emphasized that under the United States Housing Authority the first move must be made by the cities where public spirit demands the eradication of slum areas. This is the opposite of the procedure under the Housing Division of the Public Works Administration. The Public Works Administration originated projects, let contracts, and supervised construction. Direction of the projects was centralized in Washington. The United States Housing Act calls for projects locally designated, locally constructed, and locally operated.

The United States Housing Authority, operating under the United States Housing Act of 1937, must not be confused with the Federal Housing Administration, operating under the National Housing Act, which has a wholly different function. Neither should the National Housing Act Amendments of 1938, which

<sup>4</sup> Department of the Interior, United States Housing Authority, Division of Research and Information (Washington, D. C., 1938).



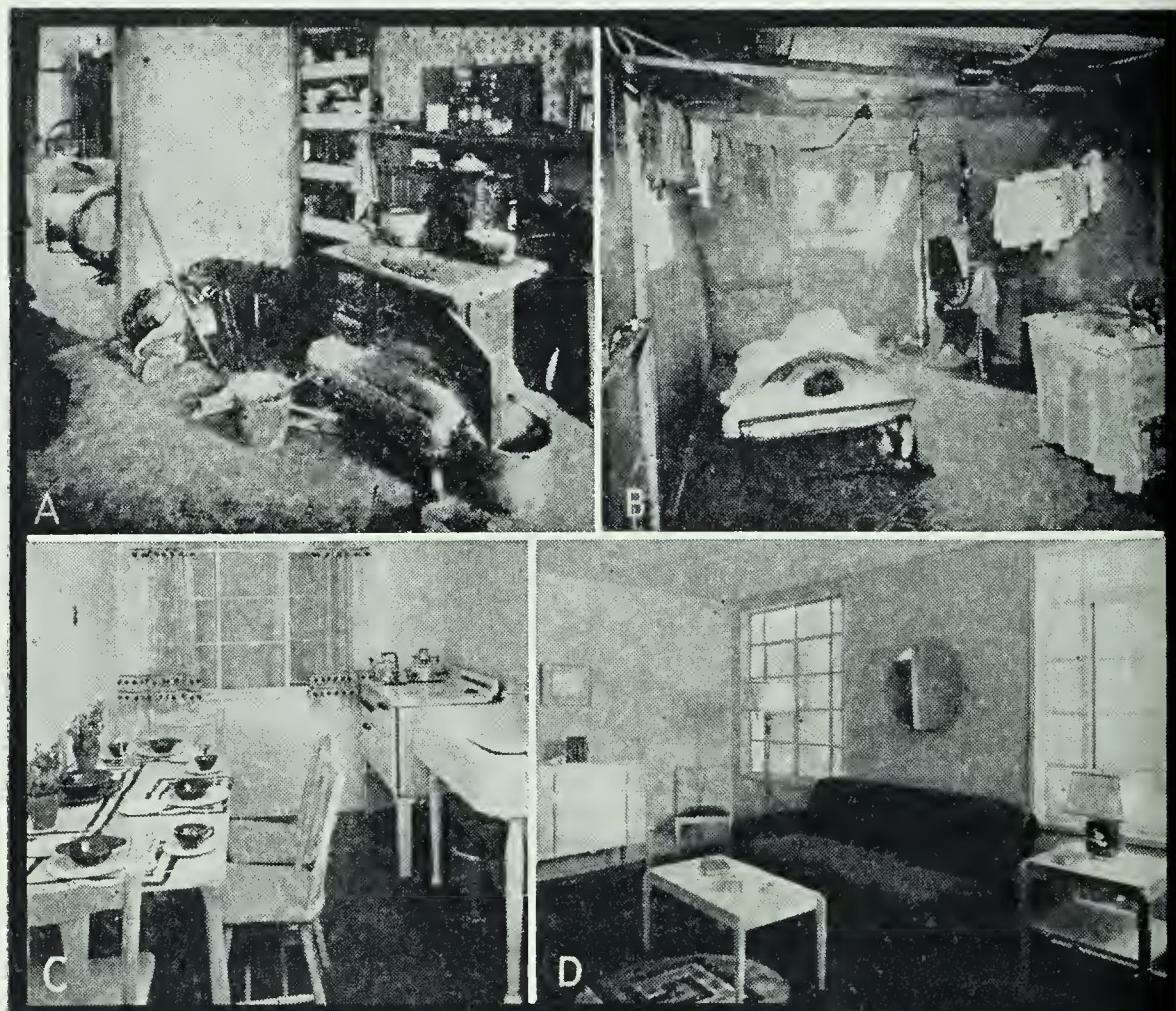
Courtesy of "Better Homes and Gardens."

Fig. 14. A family gardening project.

The grass-ground lot of the top picture was developed into an attractive yard which the whole family enjoys and helps to keep up.

are intended to stimulate private building, be confused with the United States Housing Act Amendments of 1938.

The term *housing project* has come into popular use during recent years. In general, housing projects represent organized efforts to create better living conditions within a large apartment building or a group of single houses or apartments within a defined area. Refer to Figure 14, page 365. Some projects are organized and managed as ventures in coöperation among people engaged in the same type of work as is the case with the projects of the Amalgamated Clothing Workers of New York; some are the result of private philanthropy and others of government sponsorship.



*Courtesy of Public Works Administration.*

Fig. 15. A Federal housing project.

Improved living conditions effected by the Harlem River Houses, New York City. C and D show typical rooms, a vast improvement over the unhealthful conditions in A and B.

In no case, either in Europe or the United States, have housing projects provided for the lowest income groups. They are always for persons and families who can depend upon using part of their income for housing. Housing projects aid indirectly families whose incomes are only large enough to pay for food by providing better housing for those who have rent money. When the families who can pay rent move, their



*Courtesy of U. S. Department of Agriculture.*

**Fig. 16. Before and after remodeling.**

An old farmhouse is restored with few changes in the simple, Colonial lines.

cast-off housing is left for the next group below on the economic ladder. By this process of moving the general housing standards of a nation can be improved.

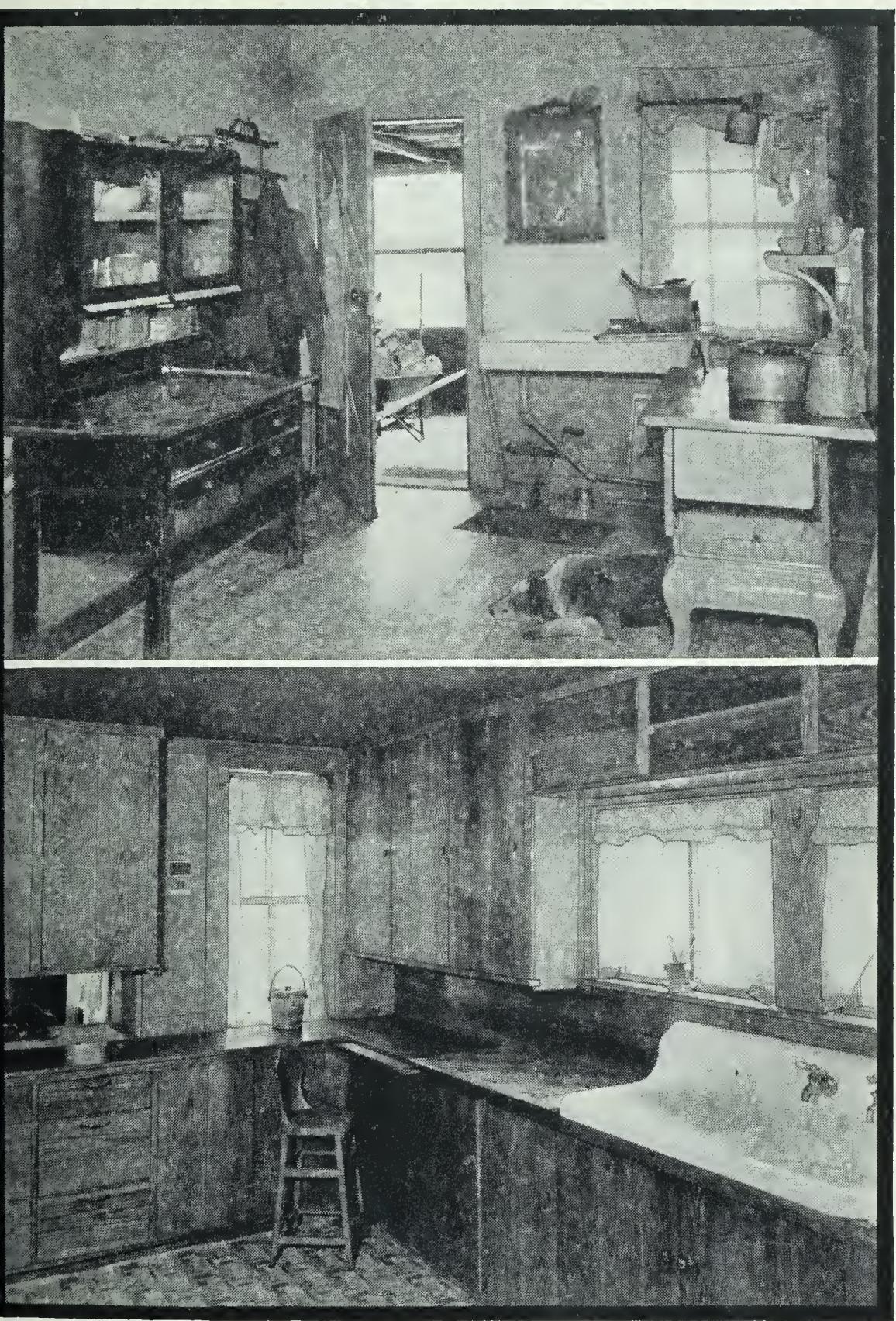
**Relationship to individual family.** With the encouragement represented in a housing project, home improvement for the individual family becomes a matter of good housekeeping and more constructive living together in the family group and neighborhood. Improved standards are not just a question of architecture and building. They are a problem of living. Farther along you should come to understand what can only be stated here, namely, that good housing is not a question of newness. New buildings can be erected and lived in according to slum standards, and old buildings can be kept up and inhabited at a very high standard. Home improvement can be individual, small, and of the family type, as shown in the first part of the chapter, or it can be sweeping and wholesale, as when an entire area of condemned buildings is razed to the ground, and new ones are erected in their stead.

Home improvements are general. They include not only considerations of care and repair but additions to the house or changes in the manner of living in it. Home improvements may concern sanitary conditions, protection and security, comfort, household working conditions, privacy, causes for friction among persons, use of leisure time in the home, and beauty in the individual home and community. If you choose to plan and carry out an improvement project, check your results to see in what way improvement has been effected. Chapters that follow give information and references useful in carrying out projects. Make a list similar to suggestions for Household Courtesies but specifically applicable to your home and school situation.

#### SUGGESTIONS

##### 1. *To improve physical health conditions of the house*

Cut windows in dark rooms to admit sunlight. Whenever possible, provide sunlight in closets also.



*Courtesy of the U. S. Department of Agriculture.*

**Fig. 17. A kitchen remodeled.**

Work and storage space have been increased, and orderliness made possible. Metal frames for labels on doors and drawers would make equipment and supplies easy to locate.

Make outdoor living space for summer use by improving a porch, planting shrubbery or trees, providing suitable chairs or tables.

Make outdoor play space such as tennis court, croquet space, child's sand-box, and so on.

Provide good lights for reading or work and place so there can be no glare.

Provide good circulation of air in summer for sleeping, working, and resting.

Provide even temperature in rooms. This may call for putting linoleum or rugs over thin floors or making a ceiling in the basement. It may necessitate changing the size and location of radiators, or calking windows where the frames join a brick or plaster wall, and using storm windows.

## 2. *To improve sanitary conditions*

Provide cool dry place where food can be kept covered until used.

Wrap garbage and provide covered containers.

Provide metal garbage burners for yard if city does not provide for collection or apartment building does not have incinerator.

Provide garbage burner for furnace.

Chink cracks near sinks or damp places and paint to prevent spread of cockroaches.

Stop holes in walls to prevent rats and mice from coming through.

Paint or varnish soft wood table tops or shelves to give smooth impervious surface where food may be spilled.

Varnish or enamel worn toilet seats to provide smooth hard surface easily washed.

Screen windows, doors, and porches.

Fill in or cement mud holes in yard that might cause dampness or mold in house.

In damp climates provide for airing or heating house to dry atmosphere and prevent mildew and mold.

Screen privy—use chloride of lime in pit.

## 3. *To further protection and security*

Tack or otherwise secure carpeting to stairs.

Place light where all parts of stairs can be seen.

Put snap fasteners on all corners of loose rugs.

Make cabinet with lock for inflammable or poisonous materials used about the house.

Provide covered metal box or can for dust cloths treated with furniture polish, kerosene, or wax.

When keys that can be identified are lost, change cylinder on door lock and get new keys.

Cut dead limbs of trees near buildings.

Replace unsafe electric equipment cords with safe rubber covered cords.

Have electric wiring system and construction of building inspected for safety against fire.

#### 4. *To increase comfort within the house*

Make low stools to help children wash at lavatories, get drink from sink, etc.

Provide low hooks, low book shelves, drawers or boxes for children's toys.

Provide low table and chair for child.

Increase length of side boards of bed, mattress, and covers for very tall persons.

Provide stools under dining table or in sitting-rooms for very short or aged people.

Saw off legs of work tables for short people.

Provide solid, low, broad laundry stool to be used before laundry tubs for short persons.

Provide rubber mat to be used before work centers on cement or tile floors.

Make denim scrub apron with pocket for rubber kneeling pad.

For invalids provide bedside table on casters with space on top for portable radio, water glass and jug, drawer and lower shelf for books and occupational materials.

#### 5. *To improve household working conditions*

Put screw eyes in small equipment such as brushes, potato masher, wooden spoons, and the like, and hang them on hooks above sink or stove according to amount of use at either place.

Place narrow shelf above stove if stove is shelfless to provide for salt, pepper, small shakers of flour, sugar, or materials frequently needed while cooking.

Make cleaning kit that can be carried from room to room by supplying a basket with cleaning materials. Strong paper shopping bag can also be used.

Cut stool legs to comfortable height for worker doing slow work at a sink or ironing board.

To save carrying up and down stairs, build cabinet in hall or

closet on second floor of large house for cleaning supplies such as brushes, scouring powder, dust cloths, etc.

Rearrange kitchen, bringing sink, table, refrigerator, stove, and cupboards as near together as possible, still allowing for the passage of workers. Use casters on moveable work table (see page 260).

On dairy farm provide milk room or house with hot running water for care of milk pails, dairy dishes, cream separator, and the like.

#### 6. *To increase privacy*

Hang shades to roll from bottom of window up.

Provide shower curtains for bath tubs.

Make decorative portable screens to use before doorways.

Provide bedroom for each child when house has sufficient number of rooms.

Where rooms are shared, provide twin beds, double deckers, or individual cots.

Provide room with own bed, bedding, books, radio, etc., for aged members of family.

Plant hedges. Build fences.

#### 7. *To remove causes for friction among persons*

Increase storage space for clothing with chests of drawers. Provide home-made or manufactured wardrobes, suit boxes, and divide space in closets with shelves, drawers, poles with hangers, hooks, and the like.

Make plans for use of furniture or rooms that must be shared.

Agree as to kind of use given to things shared.

Return borrowed possessions in good condition and at the time promised.

Agree about reading in bed and courtesies as to screening or turning off lights.

Agree about rising hours and use of alarm clocks.

Agree about opening bedroom windows and amount of breeze or cold admitted.

Make plan and schedule for sharing responsibilities in care of room or house.

Live up to your agreements cheerfully.

#### 8. *To improve beauty in individual home and community*

Recondition a useful but discarded piece of furniture.

Paint, varnish or wax woodwork to harmonize with room furnishings.

- Study texture of materials and consider use as well as color.  
Study size of furniture in relation to size of room.  
Study amount of furniture in relation to size of room and arrange to avoid crowding. See pages 171, 172.  
Study decoration of furniture and avoid fussiness. See page 196.  
Study furnishings and plan to emphasize with color or prominent placing the few most important pieces.  
Make draperies.  
Make chair, bed, dresser, or other covers.  
Redecorate an entire room or the house.  
Remodel the house.  
Place plantings near bare foundation house walls to "tie" the buildings to the ground.  
Landscape the yard.  
Recondition a weed-grown lot.
9. *To provide for use of leisure time in home*
- Build book shelves, cases, or music racks.  
Build games for home use.  
Set aside drawers or arrange boxes in closets for storage of games to be played in living-rooms.  
Recondition an unused room, basement, attic, or barn for play.  
Build work bench or room for tinkering.  
Build space or rearrange room for hobby.  
Make flower garden.  
Grow herb garden.  
Make flower-pot garden on porch or roof of city building.

#### REFERENCES

- Books*
- BRANDON-JONES, Anne, *Simple Stitch Patterns for Embroidery* (Peoria, Ill., Manual Arts Press, 1936). Builds up embroidery patterns from various stitches, thus making worker quite independent of printed designs or tracings. Line and halftone illustrations. Color suggestions.
- Delineator Home Institute, *Painting Furniture* (New York, Butterick Publishing Co., 1928), 36 pp.
- FRASER, Chelsea, *The Practical Book of Home Repairs* (New York, Thomas Y. Crowell Co., 1925).
- GRIES, J. M., and FORD, James, editors, *Housing and the Community, Home Repair and Remodeling* (Washington, D. C., The President's

- Conference on Home Building and Home Ownership, 1932). Part II, "Reconditioning, Remodeling and Modernizing. Gives suggestions but not specific directions.
- GRIFFITH, Ira, *Furniture Making* (Peoria, Ill., Manual Arts Press, 1935). Working drawings and perspective sketches of fifty-one simple well-designed pieces of furniture. For high-school students.
- , and COX, George, *Essentials of Woodworking* (Peoria, Ill., Manual Arts Press, 1931). High-school text covering tools, processes, and materials involved in elementary woodworking.
- HALBERT, Blanche, editor, *The Better Homes Manual* (Chicago, University of Chicago Press, 1931), Chapter XIV. Shows need for home improvements and gives suggestions.
- JEFFREY, Harry, *Wood Finishing* (Peoria, Ill., Manual Arts Press, 1924). Covers finishing of new furniture and refinishing of old.
- JOHNSON, Emil, *Furniture Upholstery for Schools* (Peoria, Ill., Manual Arts Press, 1919). Contains historical sketch, list of tools and materials, and practical directions for making various kinds of upholstery.
- MOCHRIE, Elsie, *Simple Weaving* (Peoria, Ill., Manual Arts Press, 1936). An attractively illustrated book on small table looms and their use.
- NEWELL, Adnah Clifton, *Coloring, Finishing and Painting Wood* (Peoria, Ill., Manual Arts Press, 1930). Extensive discussion of wood stains, fillers, varnishes, enamels, oils, lacquers, and paints.
- NOYES, William, *Wood and Forest* (Peoria, Ill., Manual Arts Press 1928). Describes sixty-seven pieces of wood as to sources, properties, and use.
- PARROTT, Irene, *How to Make Slip Covers* (Successful Farming, 1714 Locust Street, Des Moines, Ia., 1938), 10¢.
- PERRY, L. Day, *Seat Weaving* (Peoria, Ill., Manual Arts Press, 1917). Cane seating, and weaving with other materials. Each step in various processes described and illustrated.
- ROEHL, L. M., *Household Carpentry* (New York, The Macmillan Co., 1927). Information on tools and materials, minor house-repair projects, and specific directions for making various useful household articles.
- SAYLOR, Henry H., *Tinkering with Tools* (Boston, Little, Brown and Co., 1924). Directions for woodworking, painting, door finishing, and repairs concerning minor house plumbing, electric wiring, and odd jobs.
- WOOD, Edith E., *Slums and Blighted Areas* (Washington, D. C., Department of the Interior, U. S. Housing Authority, 1938).

bulletins

Agricultural Extension Service, Gainesville, Florida.

"Foundation Plantings for Florida Homes," *Bulletin* 72.

"Water and Sewerage Systems for Florida Rural Homes," *Bulletin* 46.

Extension Service Agricultural and Mechanical College of Texas, College Station, Texas.

"Bedrooms of Comfort," *Bulletin* B75. (Very useful suggestions for rooms of inexpensive furnishings.)

"From Rags to Rugs."

"Places for Keeping Clothing," *Bulletin* C72.

Good Housekeeping Studio, *Painting and Stenciling Furniture and Refinishing Natural Wood Furniture* (New York, Good Housekeeping, 1920), p. 8.

Mutual Mortgage Insurance," Circular No. 1 (Washington, United States Government Printing Office, November 27, 1934).

State College of Washington, Extension Service, Pullman, Washington.

"A Septic Tank for the Farm Home," *Extension Bulletin* No. 200, February, 1935.

"Chair Caning," *Bulletin* 213, February, 1930.

"Home Freezing Unit, Building and Operating," *Extension Bulletin* 241, March, 1938.

"Refinishing Furniture," No. 157, June, 1930.

University of Maine Extension Service, Orono, Maine.

"Flower Gardening in Maine," *Bulletin* 197.

"Improving the Kitchen," *Bulletin* 196. (Especially helpful suggestions for rural homes.)

"Re-seating Chairs," *Bulletin* 175.

*The Annals of the American Academy of Political and Social Science*, March, 1937, Vol. 190. "Urban Housing Activities of the Federal Government," p. 83.

United States Department of Agriculture, Washington, D. C.

"American Moles," *Farmers' Bulletin* 1247. \$.05.

"Farm Dairy Houses," *Farmers' Bulletin* 1214. \$.05.

"Farm Plumbing," *Farmers' Bulletin* 1426. \$.05.

"Floors and Floor Coverings," *Farmers' Bulletin* 1219. \$.05.

"Growing Annual Flowering Plants," *Farmers' Bulletin* 1171. \$.15.

"Modernizing Farm Houses," *Farmers' Bulletin* 1749. \$.05.

"Painting on the Farm," *Farmers' Bulletin* 1452. \$.05.

"Planting and Care of Street Trees," *Farmers' Bulletin* 1209. \$.05.

"Sewage and Sewerage of Farm Houses," *Farmers' Bulletin* 1227. \$.10.

"Simple Plumbing Repairs in the Homes," *Farmers' Bulletin* 1460. \$05.

"Tree Surgery," *Farmers' Bulletin* 1178.

"Trees for Town and City Streets," *Farmers' Bulletin* 1208. \$10.

#### *Magazines*

*Popular Home Craft*, The General Publishing Co., 919 North Michigan Ave., Chicago, Ill. A home magazine with specific directions and drawings easy to understand.

*The Home Craftsman*, 115 Worth Street, New York, N. Y. A magazine of practical suggestions and specific directions for the type of home repairs and furniture building that can be carried on with a home work bench and tools. Clear illustrations.

#### *Films*

*Home Is What You Make It*—Transformation of an old farmhouse by inexpensive repairs, painting and landscaping. U. S. Department of Agriculture. 16 and 35 mm. silent.

*The Transformation—Why Farm Boys and Girls Leave Home*. American Farm Bureau Federation. 35 mm. silent.

*Transformation*—Rehabilitation of a family through modernization of home. Y.M.C.A. National Council of Motion Picture Bureau. 16 and 35 mm. silent.

# 3

## HOUSING AND HEALTH

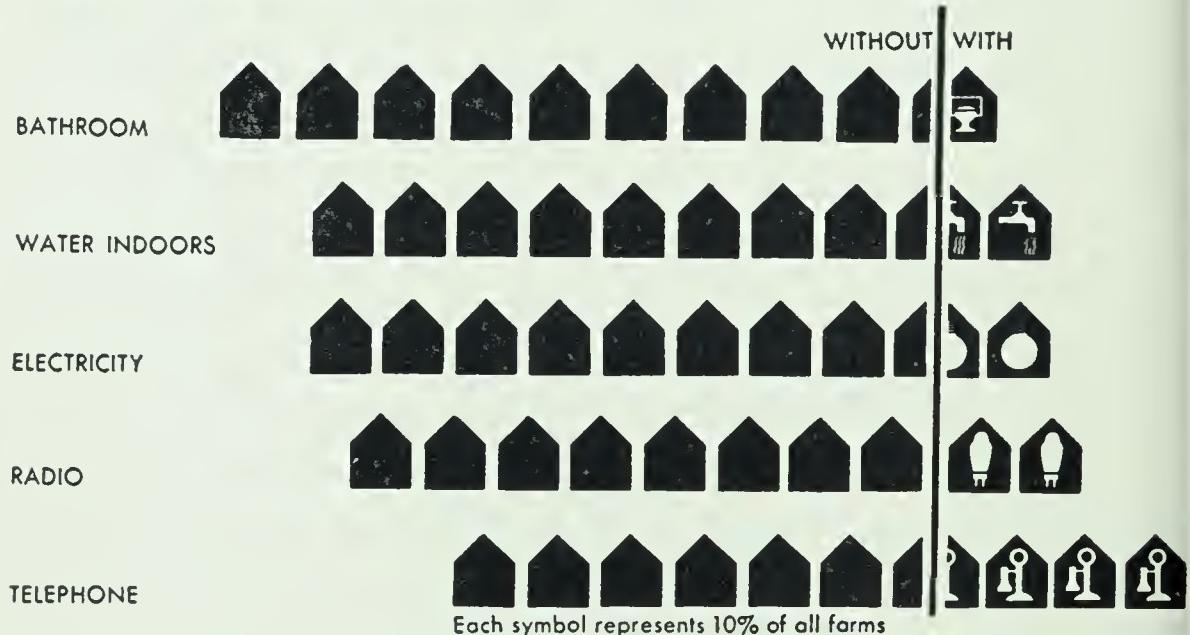
Do you know how the building in which you live can affect your safety and health? In addition, do you know how housing over the United States is linked with personal well-being? Perhaps not, for probably no one can answer this question fully. We do know that a good building protects from injuries due to such natural causes as wind, lightning, floods, and earthquakes, and is substantially enough constructed to prevent collapse or falling of parts, accidental burning and self-injury. Overcrowding is avoided in healthful housing for overcrowding intensifies the spread of bacterial diseases and contributes to emotional strains. Healthful housing prevents household pests, and it admits sunlight, which acts as a germicide, is an aid to the deposition of calcium in the bones of growing children, and provides the best of work lights when controlled. The problem of ventilation is one of creating an atmosphere of moving air with sufficient moisture as well as comfortable temperature. Interestingly enough, housing is related to allergies, and muscular strains also. The problem of creating healthful housing is to know first the ways and extent to which housing can be a menace to health and upon this knowledge to plan, build, or select and manage homes to avoid difficulties.

As you read, look for answers to such questions as:

1. What is bad about the housing in my city or town? What is good about the housing in my city or town?
2. Where is the bad in housing? Is it all in a certain section, or on a particular street?

3. Is there anything bad about the building in which I live? What is it?
4. What is a rural slum? Does every state have rural slums?
5. How is safety a consideration of health? In what way can I contribute to the safety of my home and community?
6. Are building standards the same over the United States? What proof have you for your reply?
7. What is overcrowding?
8. How is overcrowding related to the spread of bacterial diseases?
9. How is overcrowding related to irritations and emotional strains?
10. How is housing related to allergies?
11. How can housing be adjusted to help cripples and persons suffering from heart disease?
12. What conditions must be met in providing good ventilation?

### FARM EQUIPMENT 1930



Source - U S Department of Commerce *Statistical Abstract, 1936*, page 596

PICTORIAL STATISTICS INC.

**Standards.** "More than one-third of the population of the United States lives in homes that are substandard—that is, lacking in those essentials which constitute wholesome, decent living."<sup>1</sup> This strong statement was issued from the United

<sup>1</sup> *Real Property Inventory of 1934*, U. S. Department of Commerce.

States Department of Commerce upon the completion of a housing survey in various parts of the country. It is somewhat less strong, however, than one made by Mrs. Edith Elmer Wood who has long been known for her studies of housing.

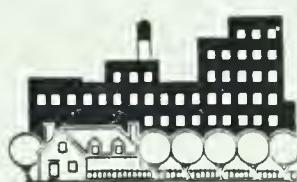
#### EQUIPMENT OF APARTMENTS AND HOMES (IN 64 CITIES)

WITH



ELECTRIC LIGHT

WITHOUT



INDOOR TOILET



TUB OR SHOWER



GAS OR ELECTRIC COOKING



FURNACE OR BOILER



MECHANICAL REFRIGERATION

PICTORIAL STATISTICS, INC.

Each symbol represents 10 per cent

She said: "It is certain that less than half of the homes in America measure up to minimum standards of health and decency."<sup>2</sup>

The question at once arises, What are minimum standards? The editors of *Fortune* answer the question by the following description:<sup>3</sup>

A minimum standard of health and decency is one below which no American family should be expected to fall. It will include neither a telephone nor central lighting (services which are generally listed among the quasi-necessities of modern life) nor central heat nor even a bath tub. But it will include: healthful surroundings for the building; ample and pure running water inside the house; a modern sanitary water closet for the exclusive use of the family and located in the house; enough rooms and large enough rooms to give the members of the family necessary

<sup>2</sup> *Recent Trends in American Housing*, 1931, p. 40.

<sup>3</sup> Editors of *Fortune*, *Housing America* (New York, Harcourt, Brace and Co., 1932), p. 5.

privacy; sunlight and ventilation and dry walls; adequate garbage removal; adequate fire protection; a location within reach of work; a cost not to exceed 20 per cent of family income.

A minimum standard is a matter for individual understanding and is also one of general social concern because diseases spread, and unwholesome social conditions cannot be isolated and kept in one locality. In time a whole population is affected indirectly if not directly. It is, however, not always easy to measure accurately to know just when a minimum standard has been reached. Many points must be considered.

**Housing a part of the environment.** We have long been familiar with the relationship of food to health, but the influence of housing on health is not so well known. Food is taken into the body, digested, assimilated, and becomes part of the muscle, glands, bone, and nervous system. Not so with housing. Its relationship is different in nature for housing is the immediate environment within which the human being lives. Good housing protects from wind, lightning, floods, rain, and snow. It gives a sense of safety from prowling animals or vicious human beings. It aids in giving a feeling of social security. It offers comfortable, pleasant association with members of the family or friends and yet permits the privacy so much needed by individuals of all ages for rest and recuperation from the day's work and worry.

We see the relation of housing to health readily through its failures. In the more exaggerated connections housing inadequacies show through accidents within the home. Persons are killed, crippled, or scarred for life by injuries in their own homes. When, as in the old castles of Europe, persons were cast into basement dungeons for punishment and came out months later white of skin, listless, and so sensitive to light as to be blinded even with comparatively small amounts of sunshine, there were vivid examples, beyond the range of accident, to show the effect of housing on the life of persons. Like plants kept in darkness, life persisted but with difficulty. Ordinarily healthy adults have freedom from the confinement of one room or even a house, but babies kept in sunless rooms

or dark apartments are but little better housed than the dungeon prisoner. That intelligent citizens should house themselves in sunless places is inconsistent; yet in New York City it is estimated that there still are from 200,000 to 250,000 of the Old Law interior rooms without windows to the outer air and used for human habitation. Other cities also have their dark spots.

Housing enters into the problem of health in a variety of ways and has a direct relationship to the communication of different diseases as will shortly be pointed out. Likewise housing frequently has a direct relationship to nervous difficulties of a pathological nature, as when through worry over failure to meet mortgage payments a home owner becomes despondent; or when a child, living in a community where a kidnapping has been known to have taken place from a house at night, is afraid to sleep in a house. Extreme anxiety or fear affects appetite and in time the general health of individuals.

The healthfulness of housing depends upon its safety and the measure of protection from disease it affords. Both the building and manner of keeping house and living in it are responsible for the degree of safety and protection. Slum living can quickly make a blighted area in the best of new buildings, whereas good housekeeping and high standards of living can make poor buildings habitable. This chapter is devoted to showing relationships between housing and health. Hereafter *housing* will refer both to the building and manner of living in it.

#### THE SAFETY OF CONSTRUCTION

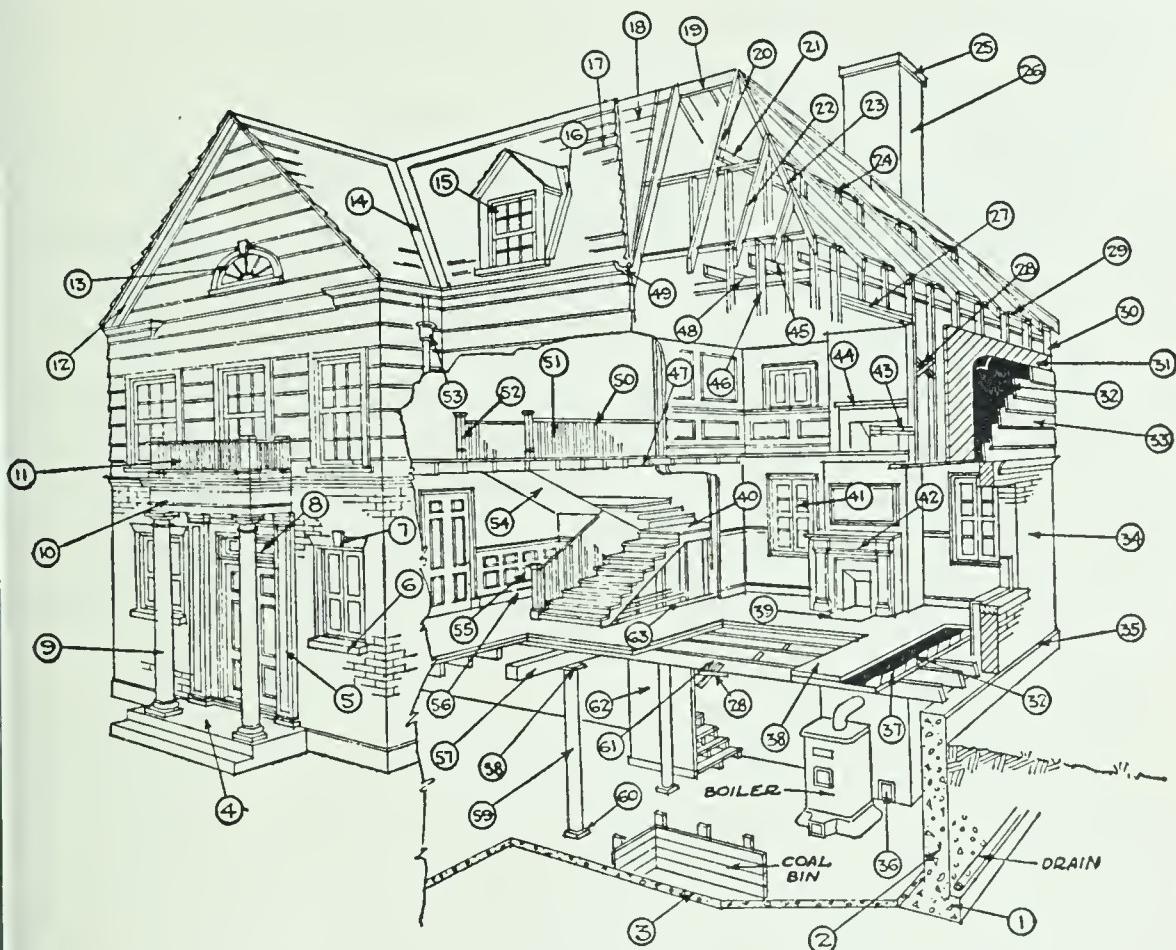
**Nature of safety.** One of the earliest functions of shelter was to provide protection. Before the advent of building early man appropriated caves and piled stones at the openings or kindled fires outside to keep away animals and other primitive men who too might want to use it. Later, trees were tied together into rude huts, or felled trees and other materials

were combined in simple structures. The art of building was not learned quickly and many a primitive house fell on its builders. Nor is the falling of buildings because of faulty construction confined to the historical past; new buildings at this late date are known to collapse. Building cement is not of substantial proportions; wood beams are too small or not closely enough set. A multitude of defects account for the collapse of a wall or the entire structure. In general, workmanship and engineering are bad.

Where weather conditions are favorable the year around, thin walls and light construction may become the general practice. Earthquakes rattle such buildings to the ground easily, and tornadoes rip them apart. The Imperial Hotel in Tokio, Japan, that withstood an earthquake severe enough to wreck buildings about it illustrates the importance of more substantial building even though there is comparatively little need of it as protection against cold.

It is not uncommon for stairs to be constructed so faultily that they tear away from supporting walls or for treads to loosen and tilt with walking. Obviously, danger to life is involved. So also, plaster may not be forced through the lath cracks far enough to hold. Falling plaster in a finished house is not only detrimental to furnishings but extremely dangerous to inhabitants since the weight and force of it have been great enough in many cases to kill people. To cover good and poor house construction is a complete study in itself. The illustration (Figure 1) shows the many places to be considered when judging a frame house.

**Hazards from aging.** The aging of a well-constructed building may make it dangerous both because of possible accident and detrimental effects upon health. Rotted shingles and pieces of siding tear loose and are blown about in wind storms; sagging floor beams break and start the fall of plaster; clogged drains keep stagnant water in basements thus creating unsanitary places; loose chimney bricks permit the overheating of adjoining wood and the outbreak of chimney fires; an innumerable other changes caused by aging make once goo-



Courtesy of the U. S. Department of Commerce.

Fig. 1. Where to look when judging a wooden house.

- |                     |                      |                      |
|---------------------|----------------------|----------------------|
| 1. Footing          | 22. Jack rafter.     | 43. Rough sill.      |
| 2. Foundation wall. | 23. Hip rafter.      | 44. Mantel.          |
| 3. Basement floor.  | 24. Purlin.          | 45. Ceiling joists.  |
| 4. Porch floor.     | 25. Chimney cap.     | 46. Studding.        |
| 5. Pilaster.        | 26. Chimney.         | 47. Floor joists.    |
| 6. Window sill.     | 27. Header.          | 48. Ribbon.          |
| 7. Key stone.       | 28. Bridging.        | 49. Gutter.          |
| 8. Transom.         | 29. Plate.           | 50. Handrail.        |
| 9. Column.          | 30. Corner post.     | 51. Balustrade.      |
| 10. Entablature.    | 31. Sheathing.       | 52. Newel.           |
| 11. Balustrade.     | 32. Building paper.  | 53. Leader head.     |
| 12. Cornice.        | 33. Siding.          | 54. Stair soffit.    |
| 13. Fan window.     | 34. Brick.           | 55. Wainscoting.     |
| 14. Valley.         | 35. Water table.     | 56. Base.            |
| 15. Dormer window.  | 36. Cleanout door.   | 57. Girder.          |
| 16. Flashing.       | 37. Subfloor.        | 58. Column cap.      |
| 17. Shingles.       | 38. Finish floor.    | 59. Basement column. |
| 18. Roof sheathing. | 39. Hearth.          | 60. Column base.     |
| 19. Ridge.          | 40. Stair landing.   | 61. Joist.           |
| 20. Common rafter.  | 41. Casement window. | 62. Partition.       |
| 21. Collar beam.    | 42. Fire place.      | 63. Lath."           |

buildings unsafe. Constant watching and upkeep are needed on all buildings to preserve safety.

**Termites.** Termites are insects resembling large ants, but not of the ant family, that bore their way through wood leaving it pulpy and weak. For the householder the important distinction between termites and ants is their food habits. They eat wood, leather, fabric, paper, and even exude a substance that attacks metals. Where buildings are supported on wooden pillars and beams, termites have endangered life by so honeycombing the supporting timbers as to make them collapse with the weight of the building. Serious wall cracks or sagging floors should cause careful inspection of wooden supports and beams.<sup>4</sup>

**Fire hazards.** Both new and old buildings may be fire hazards. Without building inspection there are certain persons who for the sake of saving money at the time of building are willing deliberately to construct fire hazards. Buildings without sufficient exits entrap persons in case of fire; hollow wooden wall construction provides excellent draft and allows fires that start in the basement or on the first floor to travel rapidly; poorly insulated electric wiring wears away easily, thus permitting sparks to escape as the result of contacts with the exposed electric wires; improperly installed wiring may be forced to carry too heavy an electrical current with resulting accidents; and fireplaces, furnaces, or stoves may be unsafe when improperly installed.

From the reports of member companies, the National Board of Fire Underwriters found that between the years 1915 and 1919, \$11,330,183 worth of building damage yearly resulted from fires that started because of defective chimneys, a large proportion of which were on residences. Since not all losses are reported, it was estimated that \$14,162,730 yearly would be a more accurate figure. Neither of these figures shows th-

<sup>4</sup> Alfred E. Emerson and Eleanor Fish, *Termite City* (Chicago, Rand McNally Co., 1937).

"Preventing Damage by Termites or White Ants," *Farmers' Bulletin* 147.

Maurice Maeterlinck, "The Grim Society of Termites," *Reader's Digest* December, 1934.

loss of life and injury to persons as a result of fires; yet it is common knowledge that a considerable number of persons are killed yearly by house fires.

Many cities have a department of engineering and building construction from which inspectors are sent out to check on both new and remodeled buildings. Since city ordinances differ as regards safety, one should investigate the legal requirements for one's own locality. Not infrequently the local ordinance permits less in the way of safety than intelligent individual owners are willing to accept.

**Law as an aid to safety.** Experience has proven that all builders and owners cannot be trusted to have both the knowledge and integrity to build safely. In addition, general conditions of transportation, industry, and business so change localities that the type of building safe in a small town becomes a hazard when the town grows into a city. Wooden, shingle roofs and frame construction may be safe enough when lawns are very large and the house is occupied by but one family with good standards as regards safety with matches, or explosives. But when stores, garages, and dry-cleaning plants crowd in on the lot, and the once beautiful residence is subdivided for two, three, or more families each careless about piling up old papers or oily rags, throwing matches, and using defective electric light wiring, there is a change from a reasonable degree of safety to one of definite hazard.

**Standards.** Cities over the United States differ widely in their number and kind of ordinances governing construction, repair, and use of building as the following quotation from a government bulletin, *Recommended Minimum Requirements for Small Dwelling Construction*, indicates. The purpose of the committee that produced the bulletin was:<sup>5</sup>

1. To study existing building codes and determine the nature of their disagreement, and the extent to which their requirements are oppressive to the building industry

<sup>5</sup> Pp. 1-2 (United States Department of Commerce, National Bureau of Standards, Division of Codes and Specifications, Report known as B H 18).

2. To gather information concerning minimum requirements considered essential by architects and engineers for safe and proper construction of buildings of different types and varying occupancy, in an effort to secure safe, economical construction, and eliminate waste in building
3. To prepare and publish recommended building regulations based upon a consensus of reliable information obtained through various channels of inquiry throughout the country, such recommendations to represent minimum safe practice in all matters pertaining to engineering design and general building methods; these recommendations to be drafted in such form as to be easily adopted as amendments to existing building codes or adopted as ordinances by municipalities which at present have no building laws

*Part 2, Minimum Requirements for Safe and Economical Construction of Small Dwellings:* Briefly stated, in a form suitable for incorporation in local ordinances, is designed to guide those responsible in the making of city ordinances. Since city ordinances are the concern of individual citizens, this is a good bulletin to have in school libraries and to use in studying the local ordinances.

Many words and phrases need to be defined when legal standards are set, as the two following definitions taken from *A Housing Code Recommended for Use by Municipalities of the State of New York* illustrate.<sup>6</sup>

“Fire-proof construction” as applied to building means that in which all walls are of masonry or reënforced concrete; and the structural members of which have an ultimate fire resistance sufficient to withstand the hazard involved in the occupancy but not less than four hours for bearing walls, firewalls, party walls, isolated piers, columns, and wall supporting girders, three hours for walls and girders other than already specified, and for beams, floors and roofs; and two hours for fire partitions; and in which only incombustible materials are used for other partitions.

<sup>6</sup> *A Housing Code Recommended for Use by Municipalities of the State of New York*, prepared by a Committee representing the New York State Conference of Mayors and Other Municipal Officials, the New York State Department of Health and the State Board of Housing, pp. 21-22.

"Firewall" means a wall which subdivides a building to restrict the spread of fire, and which starts at the foundation and extends continuously through all stories to and above the roof.

"Semifireproof-construction" as applied to building means that in which all walls are of masonry or reënforced concrete; and the structural members have an ultimate fire resistance of not less than four hours for firewalls and party walls; three hours for other walls, isolated piers, columns, and wall supporting girders; two hours for fire-partitions, girders not otherwise specified, exposed beams, floors and roofs; and one hour for other partitions unless made entirely of incombustible materials.

The standard for demolishing buildings varies in different parts of the same city as well as from city to city. When, however, property becomes too dilapidated to be economically profitable, it is likely to be wrecked. Low rents and high property taxes take out unsafe buildings faster perhaps than good laws.

Fire and other insurance companies can exercise a highly beneficial influence in setting and maintaining standards of safety. It is a question of good business to them that there should not be loss of life or property.

**Floods.** Floods like fire are a great menace to safety. In addition to the danger of immediate loss of life from drowning there is added danger of epidemics because of unsanitary conditions created, not only from river or surface water but from the breaking of sewage lines. The filth left on buildings after floods makes them a menace to health if precautions are not taken to dry the basements as well as the first-floor rooms, and to scrape, repaint, or otherwise resurface the walls and floors.

#### HOUSEHOLD ACCIDENTS

"The toll of accidental deaths in 1936 is indeed a monument to human carelessness: 38,500 persons killed in homes; 37,800 killed in motor vehicle accidents; 20,000 killed in public accidents (other than motor vehicle); and 18,000 accidental

deaths in occupations." This quotation is taken from a communication of the National Education Association. *Safe at home* becomes an expression to be conjured with in connection with figures such as these.

Falls, scalds and burns, asphyxiation, poisons, cuts and scratches, electrocutions, building fires, and other causes appear in the list of reasons tabulated for home accidents. In addition to the accidents serious enough to be reported and counted statistically there are numerous others too slight to receive recognition.

According to a statement in a pamphlet published by the Metropolitan Life Insurance Company, "Most of the accidents which occur in homes result from unsafe habits or from unsafe conditions which usually can be corrected without much cost or trouble." The following suggestions adapted from the same source show the ease of preventing many serious home accidents.

**Falls.** Nearly half of all home injuries result from falls, the greatest number of which occur on steps." Properly light

stairways and keep them free of toys, brooms, soap, and other household articles. Protect steps and stairways with hand rails. Watch your step: make haste slowly going up and down stairs.

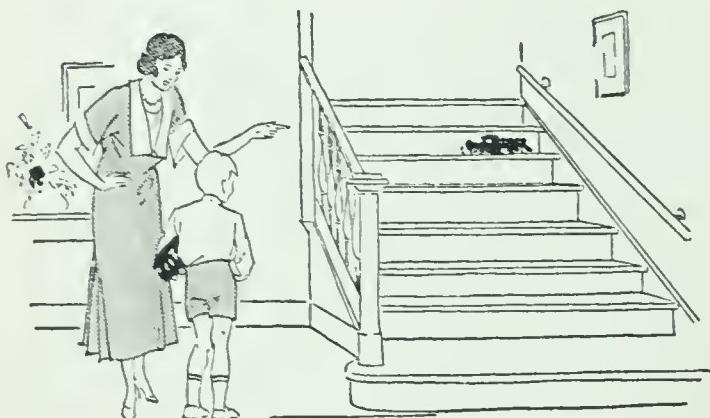


Fig. 2. Keep toys and loose objects off stairways.

balconies and porches with railings of sufficient height and strength to prevent falls.

Use snap fasteners on small loose rugs on polished floors. Many injuries caused by tripping or stumbling over playthings, books, and other objects can be avoided by putting away such articles after use. Push chairs and other furniture

Use window guards and well-constructed

ward wall leaving an easy passage for any one who might need to go hurriedly through rooms at night.

Remove ice, snow, grease, wet leaves, and other slippery substances from porches and walks. Scatter ashes, sand, or salt on icy steps or walks.

Use a strong step-ladder while hanging pictures, arranging curtains, and cleaning shelves. Avoid standing on chairs, boxes, and the like.

Rubber mats placed in bath tubs help to prevent slipping while bathing. Handholds on the walls are also useful safeguards for both tub and shower baths.

**Burns.** "Burns and scalds cause about one-fourth of all injuries in the home. Almost one-half of these accidents happen to children under fifteen years of age."

The use of gasoline and other inflammable fluids for cleaning is very dangerous, particularly indoors, as heat from rubbing an article may cause a fire or explosion. Wash garments in soap and water whenever possible or use non-inflammable cleaning fluid. Store oiled dust cloths in tightly covered tin boxes. Children's curiosity about food cooking on stoves sometimes results in serious burns or scalds. Place pots and pans out of their reach and turn handles to back of stove. Keep all open kettles of hot liquid off the floor.

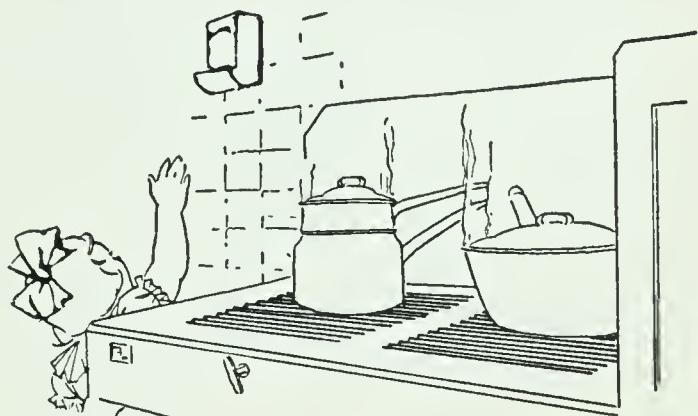


Fig. 3. Place matches and pot handles so children cannot reach them.

Handle containers of hot liquids carefully, particularly when children are near, as they may get in the way and cause injuries to themselves and others. Teach children that fire burns, that burns are painful and can be avoided by staying at a safe distance from stoves. Provide pail of sand near range to put out small fires. Examine the ease with which gas ovens can be lighted.

Use protective screens before fireplaces. Loose dresses and aprons ignite easily and should not be worn near open fires. Children are occasionally burned to death when their clothes catch fire. Teach children to roll, not run, if this happens. Where there is a fireplace or other danger, children's cotton clothing can be fireproofed at the time of laundering by dipping the garment in a fireproofing solution, made by dissolving three ounces of boric acid in two quarts of hot water and adding seven ounces of borax, before hanging up to dry.<sup>7</sup>

**Asphyxiation.** "Many people think that gas asphyxiation occurs largely in gas plants or near mains. However, the careless and improper use of gas appliances in the home generally

causes dangers greater than those to be found in the industry."

Check your gas stove, refrigerator, water heater, frequently. When they leak, have repairs made by a trained person.

Fig. 4. Burn rubbish in proper containers away from the house.



sleep or leaving a room indefinitely be sure to turn off the gas. Never bring burning matches and lighted candles or oil lamps into a room where gas is escaping, as an explosion may result. Gas flames may be extinguished by water boiling over on the stove and thus allow gas to escape.

When gas is used for a long time, fresh air in the room is very important. In a closed or poorly ventilated garage a person may die from the fumes of a running automobile engine.

"Coal gas" often escapes from dirty or poorly kept furnaces stovepipes, and chimneys. Possible suffocation from "coal gas" may be prevented by keeping the heating system clean and in good repair. Many heating devices give off carbon monoxide

<sup>7</sup> "Fire-Proofing," *Farmers' Bulletin* No. 1786.

gas when the burners are not properly regulated. Unless flues are provided, this gas is dangerous, especially in small unventilated rooms.

**Electricity.** Usually a shock is felt when any part of the body touches an electric current and a ground at the same time. If a person who comes from a bath or who is damp from perspiration grasps a faulty electric fixture, while turning a water faucet, a severe shock may be received. In some instances breathing stops. If the current is not broken, serious burns or even death may follow. Be sure your hand is dry before touching anything electrical.

Inspect and repair or replace promptly worn cords, broken fixtures, or electric devices. Avoid light, telephone, and radio electric wires or fixtures while touching faucets, pipes, drains, radiators, and other metal objects, especially with wet hands. Loose connections, poorly made splices, and home-made installations frequently cause flashes resulting in burns or fires. Disconnect electric irons before leaving a room.

**Fires.** Remember to clean stovepipes and chimneys, and repair loose joints and bad flues. Chimney soot deposits frequently catch fire showering sparks on roofs. Metal containers are best for hot ashes. Wire trash burning baskets with covers for yard use keep burning paper and rubbish from blowing and setting fire to near-by objects.

Avoid loose curtains, draperies, and similar materials near stoves, lamps, gas jets, and candles. Lighted candles on Christmas trees are very hazardous and have caused much loss in life and property. Matches, cigars, and cigarettes also cause many fires when these articles are not put out after use. Rubbish piles and old newspapers should be disposed of promptly. oily and greasy rags should be kept in metal containers as frequently they become ablaze through spontaneous combustion, no light or flame being needed to ignite them.

**Firearms.** To prevent accidents where firearms are kept in homes, place them under lock and key, or put away so that children cannot reach them. It is a good rule to unload, clean, and put them away immediately after use.

**Poisons.** "In many homes certain substances of a poisonous nature are used as germicides and insecticides, and for household cleaning. Carelessness in storing poisons is the cause of many accidents of this kind."

Keep poisons in locked cabinets. Label all containers clearly or use specially shaped containers or bottles. Labels which show in the dark are an advantage. A pin in the cork of a bottle is another good way to indicate a poison.



Fig. 5. Dispose of broken glass promptly and in a safe place.

**Cuts and scratches.** Keep broken glass, cans with jagged edges, old razor blades, and similar articles separate from other waste and place in a strong, tight box or can.

Pins and needles left on chairs or on other pieces of furniture, loose tacks or nails on the floor, and splinters in boards often cause puncture wounds which, if neglected, frequently become infected.

**Other home hazards.** To avoid the bumps of falling objects provide strong and wide enough shelves to support the articles stored. Do not crowd articles into spaces too small for them.

Avoid injury when lifting heavy materials by keeping the back straight and the heels on the floor as shown. Apartment and other high buildings where moving goes on regularly should have freight as well as passenger elevators.

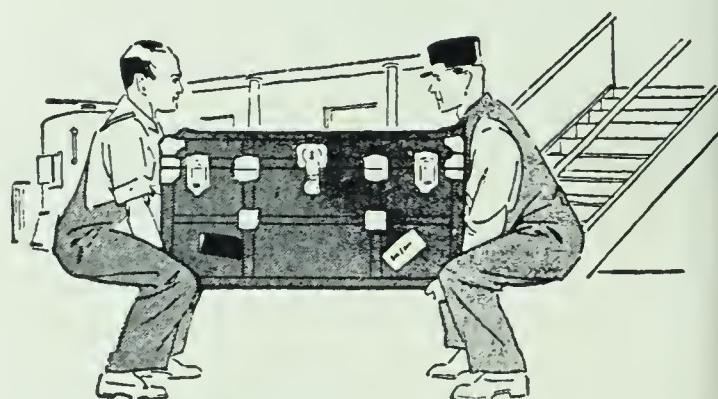


Fig. 6. Use your legs when lifting and keep back straight.



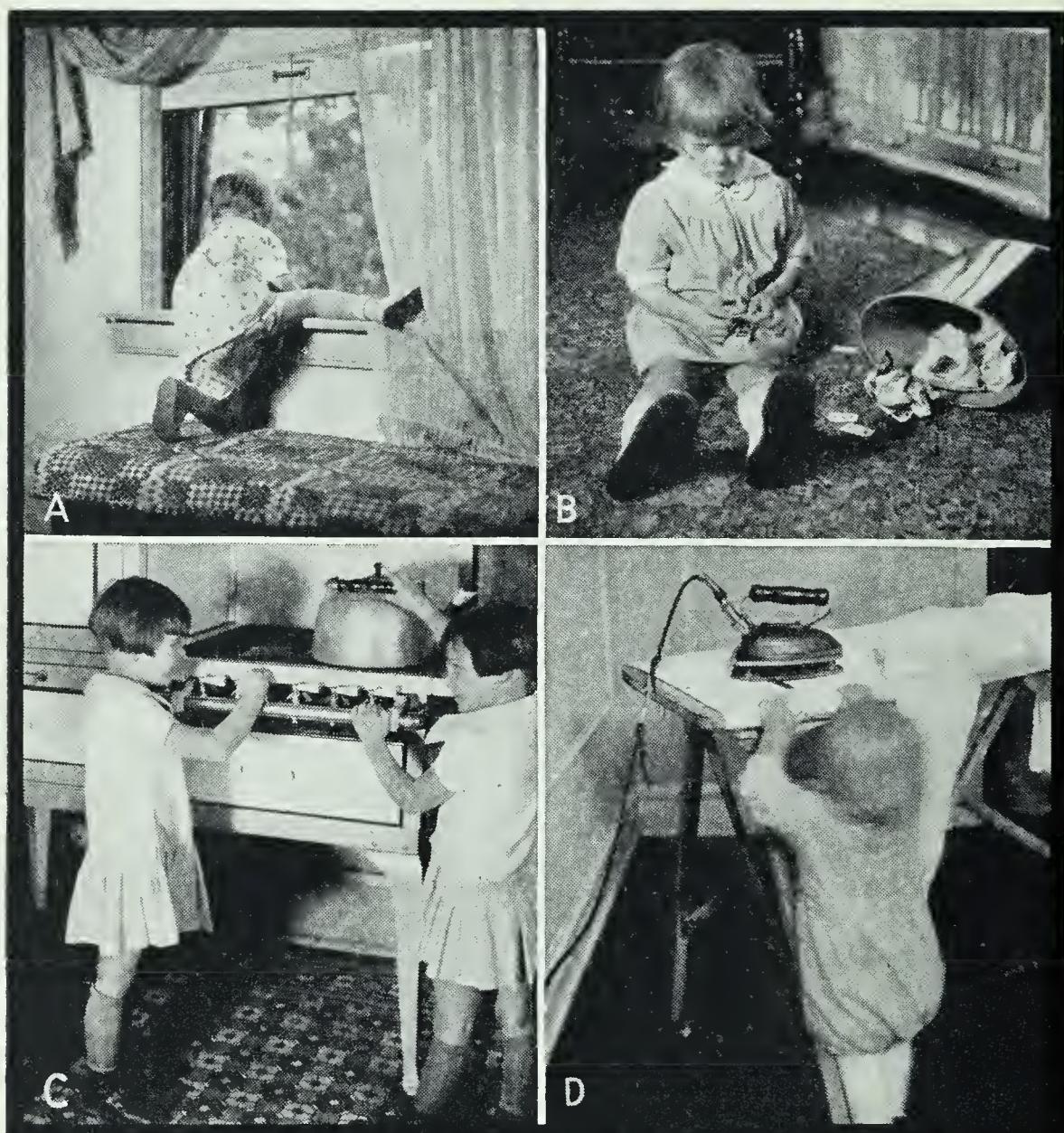
Courtesy of Works Progress Administration, Chicago.

**Fig. 7. Wild rats should be irradiated.**

A shows how rubbish provides subsistence and shelter for rats. In B and C the children pictured have been bitten by rats.

Avoid leaving loose wires, boards with nails, rakes, and hoes on the ground.

When a wire must be stretched to protect new seeding, tie it at intervals with white rags so that persons may see it and avoid tripping.



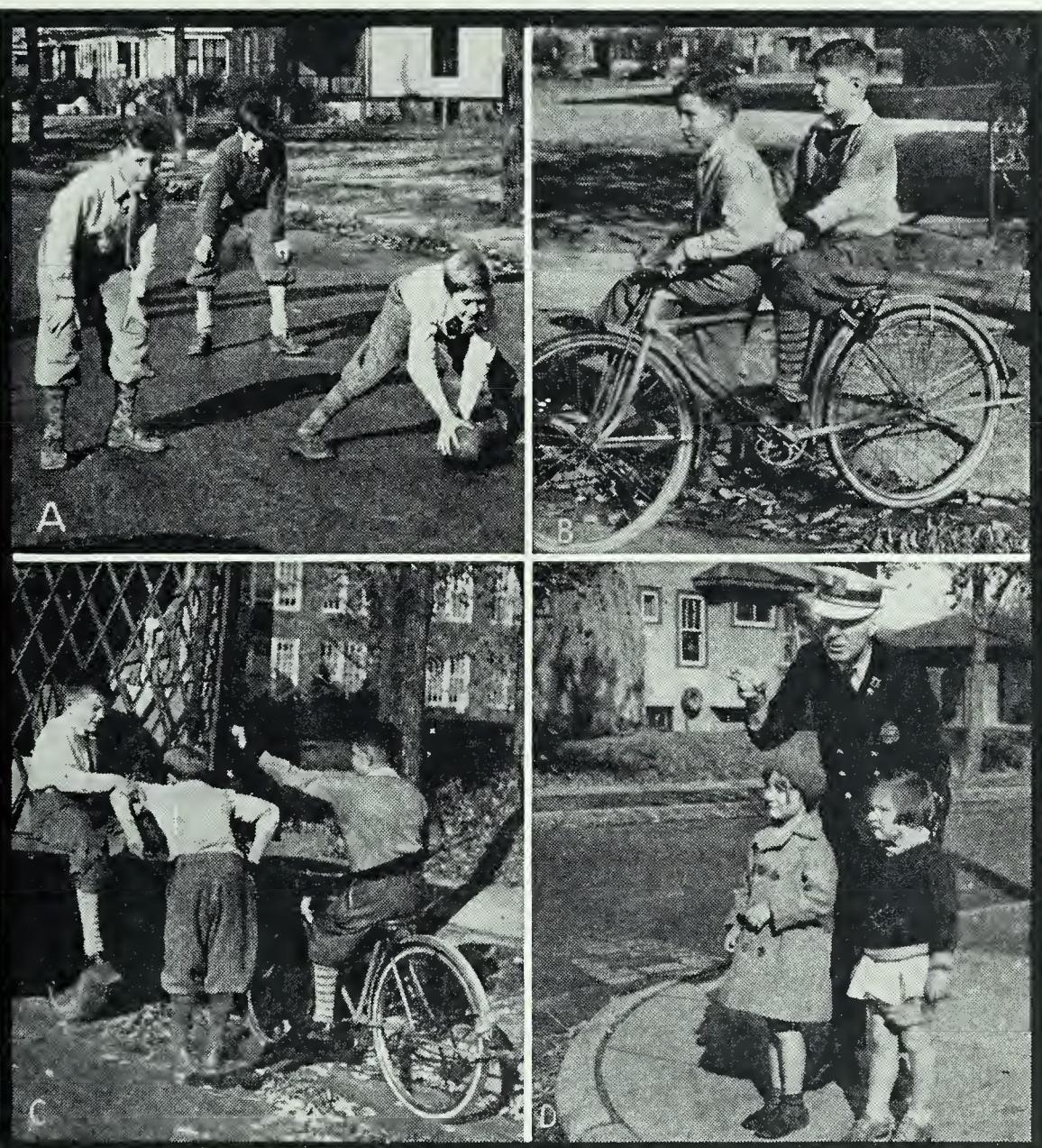
*Courtesy of the National Safety Council.*

**Fig. 8. House hazards for children.**

- A. The insecure screen barrier to a sixty foot fall. B. Razor blades left in a waste basket. C. Fire, a scald from boiling water, asphyxiation. D. Three hazards—fire, a falling weight, an exposed wire.

Small children put objects in their ears, nose, or mouth, thus causing serious injury, when they become lodged or swallowed. Before letting young children play on the floor, look for such articles as marbles, pebbles, tacks, pins, or seeds, and pick them up. Coins should not be given to children. They are not clean and, if placed in the mouth, may be swallowed.

Keep cisterns or wells covered or fenced. Very young chil-



Courtesy of "Minneapolis Tribune."

Fig. 9. Street hazards for children.

- A. Don't play football in the streets.
- B. Never ride two on a bike.
- C. Don't hitch rides on trucks.
- D. Don't forget to look to left and right before crossing the street.

Children have sometimes been drowned by being left unguarded in bath tubs or while playing near wash tubs.

Most modern labor-saving machinery for the house is equipped with devices to prevent contact with moving parts. Keep safeguards in place and replace them at once following repairs.

At the time of purchasing any new type of equipment not only the home-maker but also all members of the family, who are mature enough to learn, should be trained in its proper use and care. A considerable number of manufacturers supply cards or booklets of instructions which, if consulted, prevent accidents and increase the usefulness of the piece of equipment. Frame these and hang on or beside the particular piece of equipment.

Wringers are sometimes responsible for broken fingers, arms, and torn flesh. Look for safety devices when buying wringers or washing machines with wringers attached. For farm homes in which separators and gas engines with handles are used, guards should be provided. Fingers can be caught and torn in food choppers. Learn to use a wooden press rather than the fingers when trying to force food into the knives.

Stray cats and dogs, when allowed in the home, often bring unsuspected dangers and may carry vermin and disease. Hungry rats will bite humans. See Figure 7. Children have died as a result of rat bites received while in their cribs. Do not set out food, thinking that rats will eat it and not disturb children. They only multiply and become a bigger menace. Rats are common to all parts of the United States. Houses should be rat-proofed, alleys cleaned, and food kept in refrigerators or metal containers.

#### HOUSING AND DISEASES

**Diseases related to housing.** There are many diseases to which housing bears a peculiar relationship. Many are diseases resulting from bacteria that are distributed by various means within the house.

However, not all diseases to which housing bears a definite relationship are of bacterial origin. Some are allergies caused by feathers, dust, soot, pollen, temperature, etc. Others may be the result of insufficient light, muscular strain in lifting, and irritations such as those of constant noise. As you read farther you will find many illustrations of different ways in

which housing is related to disease. Only as a result of knowing possible causes in general is one in a position to discover causes in specific cases and thus plan solutions for problems. Disease doesn't happen by magic. There is always a reason. The problem is to find it.

**Diseases of bacterial origin.** Bacteria of a specific type are always present to cause diseases of bacterial origin. Tuberculosis, malaria, pneumonia, scarlet fever, small pox, chicken pox, mumps, measles, gonorrhea, syphilis, typhoid fever, amoebic dysentery, cholera, bubonic plague, yellow fever, oriental sprue, leprosy, skin infections, tetanus, and others are diseases caused by micro-organisms transmitted either directly or indirectly from the infected to the uninfected. Influenza and spinal meningitis are also transmitted from person to person though bacteria have as yet not been isolated for these diseases. It is believed that a filterable virus is responsible for them; that is, a substance minute enough to pass through the finest of porcelain filters. Though far from complete, the foregoing list of familiar diseases is sufficient to show that housing is a matter of family as well as public concern when attempting to control them. We are interested chiefly from the family point of view.

Bacteriology has taught us that harmless as well as disease-producing bacteria are present in large numbers and the question arises, "Why don't disease bacteria always produce disease?" Briefly, because of individual body resistance and immunity, both natural and artificially produced. We should all have died long ago except for the capacity of the healthy body to kill or resist disease-producing bacteria. Also, many bacteria never gain entrance to the blood stream because the skin prevents it. But even a healthy body succumbs to bad enough conditions. So the problem of healthful housing is to stop the increase of disease-producing bacteria and create a healthful environment.

The time was when primitive peoples thought diseases were the result of evil spirits and imagined that prayers and incantations could remove them. Disease need no longer be a result

of superstition and disgrace. The chief disgrace now is to neglect illness and pass disease on to others, for sanitary science indicates that it is possible to wipe out disease of bacterial origin. Diseases, such as the Black Death that swept Europe and Asia, taking as much as a fourth of the population in a single epidemic, have to a large extent been brought under control because Black Death is now known to be a disease of bacterial origin which better sanitation and the eradication of rats and their fleas will control. These disease bacteria are carried to humans by fleas that live on the infected rats. They cannot be transmitted from man to man.

**Overcrowding and the spread of disease.** Overcrowding is a means of spreading disease since infected persons cannot be isolated from the uninfected. In the case of tuberculosis careless patients cough and sneeze bacteria into the atmosphere, leave them on the edges of cups that too often are used by others, use the same towels, and in other ways pass their tubercular bacteria on to infect the healthy. Since overcrowding is so commonly associated with low income, poor nutrition, overwork, and insufficient rest, it is hard for those who have not succumbed to the disease to keep up the body resistance necessary to prevent its onset.

The tuberculosis bacterium is highly resistant to drying in dark places, but is quickly killed with direct sunlight; hence fabrics that come in contact with tubercular persons should be thoroughly sunned whenever possible. Windows and doors should be opened to admit sunlight. Painting or thorough washing of walls, woodwork, and furniture can make rooms used by tubercular patients safe for others. If upholstered furniture, draperies, bedding, and rugs, are sunned or washed and boiled, or are thoroughly fumigated, they too are safe.

**Measles and housing.** In Glasgow, Scotland, the incidence and communication of measles in relation to tenement housing was studied. It was found that tenement children too young to attend school communicated the bacteria through their play together on stairs, in halls, and courts. In the tenement where a common cold-water faucet at the end of a corridor was th-

only source of water, there was congregating about it. In the residential wards of the city the play of young children could be better controlled, and these children were mainly attacked after they were old enough to go to school. Obviously, there is no advantage in having measles, but if measles cannot be avoided indefinitely, then it is important to protect children until they are at least of school age. By so doing their chances for living are from ten to twenty times greater than before two years of age. Throwing young children together for play without careful supervision of health is dangerous.



Courtesy of Mrs. Della Small.

Fig. 10. Bad conditions in rural housing.

This building consists of two one-room houses, each the home of ten to twelve persons. Such houses are chiefly tenanted by beet-field workers living at the outskirts of villages.

**Overcrowding and mortality.** In 1927 Detroit housing conditions were studied in different geographical zones where it was possible to determine the average number of persons per room. The table below shows that when the average rises above .9 person per room the death-rate for tuberculosis, pneumonia, and diphtheria also rises. Infant mortality was likewise greater under the more crowded conditions. Where conditions are less crowded and the average is 0.7 or less persons per room, the

death-rates are lower also. In other words there is a definite relationship between crowding and health. Similar studies have been made of poor housing areas in other cities that show a health advantage in having more house room per person.

Average number of persons per room	Infant deaths per 1000 births	Death-rates per 100,000 population			Deaths from all causes per 1,000
		Tuberculosis	Pneumonia	Diphtheria	
0.9 or more...	86	132	113	22	10.9
0.8 .....	69	79	87	17	9.5
0.7 or less.....	62	52	77	18	9.5

"On the basis of 23,000 records of births in eight cities, the United States Children's Bureau found that the infant death rate in families which lived in homes with two or more persons per room was two and a half times that in families which lived in homes with less than one person per room."<sup>8</sup> Bad habits of hygiene or unsanitary conditions are intensified by crowding.

**Standards.** Constant overcrowding in its many forms pointed out as one of the evils of bad housing. Big families are crowded into small quarters; too many buildings are crowded onto small land areas. This kind of congestion not only furthers the spread of diseases but is responsible for social difficulties as well.

In an effort to establish a standard for measuring crowding in buildings, more than an average of one person per room was said to represent a condition of overcrowding. As a general guide this may be considered satisfactory, but as with any standard of measure, judgment must be exercised in application. For example, a kitchenette, a dinette, a bathroom or a den partitioned from a living-room only with pillars might each be called a room. Five persons living in an apartment

<sup>8</sup> Rollo Britton, "Relation between Housing and Health," Reprint 1656, *Public Health Reports*, Vol. 49, No. 44 (November, 1934), pp. 1-10.

bungalow of one living-room plus den, kitchenette, dinette, and bath would obviously be living under conditions of overcrowding, though there is a room per person. A first-grade teacher in a town where a most serious housing shortage exists reported that two of her pupils were members of a family of six who lived in a trailer. When asked where they slept, the children said, "On the floor, of course." In this same town where life in trailers is common, a standard of not over eight trailers to a parking lot is looked upon as desirable. Remarks such as, "There are only six trailers on our lot," bespeaks a kind of pride. Thus a standard regarding privacy is expressed.



Fig. 11. Every chimney represents a family of from five to eight people cooking, living, and sleeping in one or two rooms. North Pancras, London.

Trailers are a ready means to land overcrowding. Fortunately they are mobile enough to be quickly disbanded if conditions become too unsanitary. This is not true of houses. Houses must be renovated.

One can see the problem of overcrowding from a slightly different angle through a quotation from an English writer concerning English standards.<sup>9</sup>

<sup>9</sup> E. D. Simon, *How to Abolish the Slums* (London, Longmans, Green and Co., Ltd., 1929), pp. 16-17.

The simplest way of improving the standard is of course to reduce the number of persons per room; to take, for instance, one and a half persons per room instead of two.... The crux of the question is sleeping accommodation. As the children grow up, every family that includes boys and girls arrives at a stage where three bedrooms are necessary; even a family with one son and one daughter requires three bedrooms, if the father and mother are to be able to sleep in one room, as should surely be the case, and the son and daughter to have separate bedrooms. The separation of the sexes in bedrooms, so as to preserve elementary decency, is one of the fundamental problems of overcrowding.

The evil results of forcing adolescents and adults of both sexes to share the same room are so obvious that there is no need to stress them. Any standard for overcrowding that is worthy of the name must certainly include the condition that there shall be adequate bedroom accommodation to enable the parents to have one room, and the boys and girls to sleep separately. It is, therefore, the number of bedrooms, rather than the total number of rooms, which is important from the point of view of health. Eight hours out of the twenty-four are usually spent in the bedroom; far less in the living-room. Ample air space and ventilation in the bedroom are therefore essential to health; overcrowding in the bedroom is likely to be more serious than in the living-room.

The standard of Medical Officers of Health in Manchester, England: <sup>10</sup>

- a. Not more than 2.5 persons per bedroom, a child under two being counted as half a person.
- b. Such accommodation that the parents shall be able to occupy one bedroom, and that otherwise the sexes shall be properly separated as regards persons over ten years of age.

Overcrowding is visualized best through repeated illustrations of its forms. In the drawing (Fig. 11), which is a copy of a photograph not clear enough to be reproduced, chimneys are the symbol of both land and room overcrowding.

Overcrowding is not confined to families living in homes of squalor. A vivid case is that of two sons and their families who "because of the depression" live with their mother in "the

<sup>10</sup> *Ibid.*, pp. 16-17.

40,000 house." There is jealousy and ceaseless bickering between the wives; the grandmother is constantly shocked by what she calls the improprieties of a granddaughter; and life is far from pleasant according to the individual accounts of different members. There are bedrooms enough, but the hall, the living-room, library, dining-room, and game room must be shared, and hence irritating associations are forced.

Overcrowding is often thought to be confined to cities. Though overcrowding is to be found in large cities the world over, it is common also in rural places. Like malnutrition it is not confined to any one place. It is general and international. Neither England nor the United States is distinguished by the lowest standards in housing; rather they are among the countries that fortunately are growing conscious of need for improvement. When building materials are scarce, houses are many. When fuel is costly, there may be winter crowding into one or two rooms of a large house. When a single well is the only source of water, even country houses have been clustered in city slum fashion near the well. When transportation is limited, every one tries to live near the best forms. Even good news have caused overcrowding of buildings and land.

The United States Children's Bureau found 40 per cent of the tenant families in one section of Mississippi living two or more to a room, 10 per cent of whites sleeping four or five to a room, 11 per cent sleeping six or more, and cases of nine and even ten in a single room.

Furnished rooms for low-income families usually mean serious overcrowding also because the rent is higher when furniture is included, and hence the fewest number of rooms at the lowest possible outlay of rent will be accepted. Often mothers work outside the home and have little time for housekeeping. When there is drunkenness among members of the group, conditions grow bad quickly.

Where conditions of house overcrowding are most serious, parents and children of both sexes are forced to share the same room and often the same beds for sleeping. When it involves persons of other than members of the same family, the "hot

bed" practice has been used. The "hot bed" is one never without an occupant. It is known to both city and rural slum housing. During twenty-fours the same bed is likely to have three eight-hour-shift sleepers. Obviously, very unhygienic conditions can develop.

Between this extreme and that of the family in which each member has not only a private bedroom but also a bath and dressing room as well, there are many gradations of privacy. In some families where two daughters or two sons share a room, they have individual beds, dressers, study tables or desks, and either separate closets or separate spaces in the same closet. Even where the same dresser must be shared the drawer space can be divided. With attention to the problem, houses of comparatively small space can be made to provide some privacy.

**Gonorrhea.** This is a disease of bacterial origin that calls for special attention because it is transmitted through such intimate contacts as are regularly a part of home and family life.

Gonorrhea is the most constantly prevalent of all the serious infectious diseases. In the United States approximately 700,000 cases of fresh infections annually apply for treatment and over 470,000 cases are constantly under treatment. The disease affects all ages and all classes of society. It is responsible for a share of blindness and is the cause of a percentage of blindness of the newborn. Much of the surgery on female generative organs is the result of this infection and about one-half of the cases of one-child sterility. It is the cause of many chronic diseases of the joints, the bladder and the generative organs. It greatly decreases individual earning capacity, is a frequent cause of the disruption of home ties and is the underlying cause of untold suffering and misery. It affects practically all prostitutes, both public and clandestine.<sup>11</sup>

The disease-producing bacteria occur in great numbers in secretions of persons with an active infection. A bit of secretio-

<sup>11</sup> Milton J. Rosenau, *Preventive Medicine and Hygiene* (New York, L. Appleton-Century Co., 1935), p. 459.

containing the gonococcus on mucous membranes such as those of the eyes, nose, mouth, and genital organs can start gonorrhea in well persons. Washing in the same basin, lavatory, or tub; wiping on the same towels; sleeping in the same bed; wearing the same undergarments; eating with the same knives, forks, or spoons; drinking from the same cups or glasses are among the means of transmitting these bacteria from infected to well persons. Poorly washed dishes, soiled bedding, and other articles of the home may also be carriers of the bacteria.

Though gonorrhea is easily communicated by direct contacts, fortunately the bacteria are killed easily with drying, hot water, washing in strong soap suds, and with sunlight. This means that if infected persons will isolate themselves from others and follow treatment with competent physicians, they may protect others while ridding themselves of the disease. If treated early, the most serious effects may be avoided.

### Syphilis.

Syphilis constitutes a public health problem of first magnitude. It affects about 8 per cent of the total population. Four out of every 1,000 of the white population and over 7 of every 1,000 of the Negro population of the United States are constantly under observation or treatment for this disease. It occurs at all ages and in all classes of society. Nearly 10 per cent of the total first admissions of mental patients to state hospitals are cases of general paralysis and cerebral syphilis. It is also the cause of somotor ataxia and is the principal cause of cerebral hemorrhages in early life. It is responsible for a large percentage of the total mortality from cardiovascular involvement, decreases life expectancy, lowers the standard of health and contributes enormously to lowered individual economic efficiency. It causes nearly half of the abortions and miscarriages. It is a frequent cause of the disintegration of home ties and is a destroyer of happiness and the source of untold suffering. Nevertheless it is largely a preventable disease and if taken in time is curable.<sup>12</sup>

For syphilis bacteria to be transmitted it is necessary for them to pass from the blood stream of an infected person to that of an uninfected with little lapse of time for drying or

<sup>12</sup> *Ibid.*, p. 455.

change in temperature. Fortunately the spirochete or cork-screw-shaped bacterium of syphilis succumbs within a few hours to drying. Sunlight, oxygen, and salt also aid in destroying these bacteria.

**"Colds."** The "common cold" for which no single bacterium seems to be responsible is communicable. As a matter of household living a "cold" should always be regarded as serious until cured. The best of personal hygiene should be practised with as much isolation as the home permits. Rest, easily digested food, good bowel and skin elimination are important. When fever persists and a "cold" does not respond within twenty-four hours to complete rest and hygienic care, a physician should be called since the early symptoms of more serious diseases are so like those of a cold that the lay person could not be expected to recognize them. Spinal meningitis and measles, two serious children's diseases, in their initial stages closely resemble a "common cold." Neglected colds may also develop into tuberculosis.

**Isolation a means of control.** Intelligent persons suffering from communicable diseases of all kinds should be especially careful to isolate themselves as much as possible. Since persons not suffering from a disease may also be a carrier of it the common practice of using individual towels, wash cloths, tooth brushes, dishes, and table silver, is important. The well-known case of Typhoid Mary who as cook and household worker unknowingly carried the disease from family to family shows how a family member through careless habits also could distribute infections innocently to those he most loves.<sup>13</sup>

This was the case of a cook, who in 1901 was employed in a family, where ten days after entering the household a visitor developed typhoid fever. The cook had been with the family three years, so at that time there was no reason to suspect the cook. She took a place in another family, and one month later the laundress in this family contracted typhoid fever. In 1902 the cook obtained a new position. Two weeks after her arrival, the laundress

<sup>13</sup> John R. Cain, *Principles and Practice of Hygiene* (Philadelphia, Blackiston's Son and Co., 1931), p. 130.

dress here was taken ill; in a week a second case developed, and soon seven members of the household were sick. In 1904 the cook went to a home in Long Island. There were four in the family as well as seven servants. Within three weeks after her arrival, four servants were attacked. In 1906 the cook went to another family. Between August 27 and September 3, six out of its eleven inmates were attacked with typhoid fever. Then for the first time suspicion was directed to the cook. She entered the services of another family on September 21. On October 5 the laundress developed typhoid fever, and two months after her arrival two cases developed, one of which proved fatal. Altogether during five years this cook is known to have been the cause of twenty-six cases of typhoid fever.

On March 19, 1907, the cook was removed to the hospital. Cultures were taken every few days and showed bacilli off and on for three years. Sometimes the stools contained enormous numbers of typhoid bacilli, and again for days none would be found. After a detention of three years she was discharged, having promised not to cook. Two years later she broke the promise. Typhoid fever developed in two families and having become a cook in New York Hospital she was the cause of an outbreak in which some thirty-one doctors and nurses were attacked. This brought about her detection and second isolation at Riverside Hospital.

**Food pollution.** The householder is responsible for the condition of his well or cistern, the disposal of the household waste and fecal matter. Since it is possible for typhoid bacteria to be carried from privies to food on the feet of flies, it is highly important to screen privies and use enough chloride of lime or other disinfecting material to prevent the breeding of flies in privy vaults. With rare exceptions fecal matter is not used in the United States as garden fertilizer but inasmuch as immigrant gardeners come to the United States from countries where this is practised, it concerns citizens here to stop it wherever discovered since it is an easy means to the spread of disease through the use of uncooked vegetables.

Typhoid fever and amoebic dysentery are but two examples of diseases that are commonly carried in polluted water, milk,

oysters or watercress grown in polluted water. Though these foods call for special care others also can carry disease. The best of sanitary practices should be employed with all foods.

Like typhoid fever, scarlet fever and diphtheria can be carried by apparently healthy persons. Scarlet-fever bacteria have been found in the nose of a six-months-old-baby who was not suffering from the disease. It is not a mark of friendliness but stupidity or deliberate carelessness to drink from the same glass, bite from the same sandwich, or eat with the same fork or spoon used by a member of the family or friend. Such habits belong in the same category with using a common tooth brush, a practice revolting to most persons.

Parents who employ nurses for children should be sure that they are free from disease and likewise should be able to assure a nurse girl whom they employ that members of the family are healthy or isolated with respect to any communicable disease they may have.

**Tetanus.** Not only may food and water be polluted but earth also can be contaminated with bacteria. Tetanus, or the bacterium that causes lockjaw, grows in the intestines of herbivorous animals, is thrown off, and hence occurs in great numbers in manure piles. From here the bacteria are distributed to land and objects that come in contact with the fertilized earth. The life cycle of these bacteria is peculiar in that they grow only without oxygen or in an anaerobic atmosphere such as that of the intestines. When they are exposed to air, as after having been distributed over land, they form spores. Spores give them something of the same capacity for resting and regrowth later as that of seeds. In this resting stage they may be found on barn nails, dirtied tin cans, saws, splinters of boards, or other sharp materials capable of being accidentally forced into the flesh. If forced deeply they are again under anaerobic conditions with food material in the form of flesh and blood. As a result of their growth under these conditions poisonous substances responsible for fever, muscle spasms, and other symptoms characteristic of lockjaw are produced. Antitoxins may be used to prevent these violent affects and save life.

It is of the utmost importance in homes to prevent accidents that puncture the skin, but, having had such an accident, the wound should be cleansed at once by bleeding. In case of insufficient bleeding, wounds can be cleansed by soaking in several changes of boiled water cooled enough to be tolerated.

**Bacterial diseases of lower animals and man.** Bacteria are responsible for anthrax, glanders, foot and mouth disease, actinomycosis (lumpy-jaw), and rabies. They enter the body by means of skin abrasions. All are diseases of lower animals



*Courtesy of U. S. Department of Agriculture and U. S. Bureau of Biological Survey.*

Fig. 12. The rat menace.

Untidy premises as shown at left invite community rat infestation. The right-hand picture shows the uncovered garbage can, one of the most common sources of rats' food supply.

of which man is also susceptible. Any of them are easily possible in the farm home, but rabies is perhaps the one most to be guarded against in urban as well as farm homes, for dogs have rabies. If a dog is sick or particularly ill tempered without obvious cause at the time he bites, a physician should be called at once and the dog isolated and kept under observation for development of rabies. Antitoxins can be given to the victim. Not infrequently intestinal worms irritate dogs, causing them to become momentarily vicious. Though serious because flesh is torn, the bite of such a dog cannot cause rabies. If well

cleansed, the wound should heal as other torn flesh. There need be no fear of the development of rabies when this is the cause of biting.

**Malaria.** Malaria, common to warm climates but known the world around, is often spoken of as a disease of the house because the bacteria that cause it are transmitted from sick to well persons by the anopheles mosquito which frequents houses and does a considerable amount of its deadly work after sun-down. Malaria germs have a complicated life cycle, part of which must be spent in the digestive tract of the mosquito and part in the blood stream of man. Malaria cannot be transmitted directly from man to man, but is taken into the body of the female anopheles mosquito when she sucks the blood of a malaria victim. The germs then lodge in the salivary glands and when the mosquito bites the next person she injects a tiny bit of this saliva to enlarge the blood vessels and make it easier for her to get her food. Thus the malaria-infected saliva is introduced into the blood stream of the non-infected person and the disease results.

The life of the anopheles mosquito is particularly related to houses where food is in the form of human beings and there are warm, dark, quiet, damp places to lay and hatch eggs. Certain houses have been known as malarial houses because so many persons who have lived in them have suffered or died of malaria.

The anopheles associated by experience in the transmission of malaria are in the main house-hunters and night-biters, circumstances which make it likely that the house is important in the transmission of malaria. This likelihood is increased by the consideration that throughout that part of the world where malaria can be transmitted there are "malarious houses," houses where inhabitant after inhabitant acquires malaria. These houses have certain characteristics; they possess dark, dirty and often damp portions.<sup>14</sup>

<sup>14</sup> Col. Clayton Lane, "Housing and Malaria," *Tropical Medicine and Hygiene*, Vol. XXXIV, No. 24 (December 15, 1931), pp. 405-409.

Both yellow fever and malaria are controlled by first controlling the mosquito.<sup>15</sup> Since the anopheles mosquito breeds in warm, damp places it is not surprising to find that marshy places in our southern states have long been known as malarial swamps. People of these regions come to feel that "the chills and fever" are inevitable. The truth is that these diseases in man can be stopped by either draining swamps or putting a thin layer of crude oil over the surface of the water at breeding seasons, thus smothering the larvae, and by the highly important practice of completely screening houses. It does no good to screen doors only and open windows to the mosquitoes. To be effective screens must be made of fine mesh and used over all openings. Complete screening not only keeps out mosquitoes but also flies that are carriers of other types of bacteria on their feet. Flies breed in manure piles and places of filth and hence they should be kept so far as is possible from entering houses where they may walk on food and track harmful bacteria over it.

**Yellow fever.** Yellow fever, once a widespread disease, also transmitted by a mosquito that frequented houses and reproduced only when it could get human blood for food, has been largely brought under control by sanitary measures. Like the anopheles mosquito, it too needs damp, unsanitary places about houses for breeding; hence methods of cleaning and drying these breeding places control the mosquito and therefore the disease.

**Pink eye.** Pink eye is also communicable from person to person. Patients should consult a physician and avoid using wash cloths or towels and handling objects in common with other persons.

**Hookworm.** Hookworm is a disease of housing when housing includes the grounds as well as the structure. Hookworms grow in the intestines of human beings, and their eggs are cast off in enormous numbers in feces which infect ground if

<sup>15</sup> Paul DeKruif, "Will We Wipe Out Malaria?" *The Country Gentleman*, June, 1938, and condensed in *Reader's Digest*, August, 1938. This article escribes control through patients rather than eradication of mosquitoes.

there is improper disposal of waste. One worm produces approximately nine thousand eggs per day. In warm, damp, or muddy earth the worm develops into the larva stage when it is capable of piercing the skin of human beings, thus gaining entrance to the circulatory system.

Where this fecal matter is carelessly distributed over yards, and persons make a practice of walking barefooted, the larvae are picked up on the feet, make their way through the skin into the blood stream, and are carried first to the lungs. There they break through into the air sacs, pass up the windpipe into the throat, and are swallowed and thus eventually reach the intestine of the victim, where they develop into the worm stage. Children who play in unsanitary, damp, or muddy yards can easily pick up the worm larvae. Clean sand, that is frequently turned over and exposed to sunlight, rather than filthy yards, should be the playground of children. In cold climates the larvae are killed with freezing so that unless land is reinfected they can be eliminated within a year. Sanitation and good sewage disposal are highly important, especially in warm climates where the larvae are not killed from season to season.

**Chigres and other insects.** Chigres, very tiny insects that live on grass and bore their way through the skin, though usually not serious, are highly annoying when neglected and may become serious if the skin is infected secondarily by scratching. The black widow spider and Rocky Mountain fever ticks are yard menaces in some sections of the United States. Body lice under some conditions may be carriers of fevers and are a matter of home control.

Cockroaches follow plumbing and damp places in houses. They breed in walls, in cracks of wooden furniture, and other places offering protection; hence the care of houses is directly related to their control. Holes or cracks in walls should be chinked and a coat of paint used over suspicious cracks. Frequent painting encases eggs when they have been deposited on walls. Ice-box drains should be scalded frequently and when it is possible pipes should be removed, dried, and sunned.

**Athlete's foot.** Athlete's foot and certain warts are also infectious and become a household problem when an infected member of the family uses the same shower bath or tub with others. The shower rooms of public swimming pools are an important source of these diseases when care is not exercised in excluding infected individuals. The use of individual non-porous painted wooden or hard rubber-soled slippers in shower baths and the courtesy of carefully scrubbing one's tub after bathing are means of protecting others in the home.

**Other bacterial skin diseases.** Skin infections of which scabies (itch) is an example can be spread by careless use of lavatories, wash cloths, and towels.

**Cancer.** Cancer has been erroneously thought by some persons to be a bacterial disease that could be transmitted from person to person. In its initial stage it is an accumulation of abnormally functioning body cells. These cells increase in number at one point to such an extent that they interfere with the normal activity and health of the surrounding tissue. This tissue then loses its resistance and bacteria of various kinds, which are always abundant, invade the area and cause decay. These bacteria are entirely incapable of producing cancer.

Another source of confusion lies in the fact that in its last stages the cells of the original growth break away and can be carried to different parts of the body where they start other growths. These migrant cells have been mistaken for disease-producing bacteria. Experimentation on animals so bred and handled that their individual histories can be traced shows that cancer follows established laws of heredity and is not a communicable disease, as seen in the foregoing examples of bacterial diseases. Cleanliness is needed for the comfort of cancer patients cared for in their homes, but there need be no fear of contracting cancer from them. Except as conditions in the house are responsible for irritations that may contribute to the starting of the disease in persons who are hereditarily susceptible to it, cancer is not a problem that is of concern in the home.

**Allergies.**<sup>16</sup> There are many allergies that are problems of housing. A few cases will serve to illustrate the statement. Hay fever is irritation set up by pollens in the mucous membranes of the nose, throat, and eyes. Ragweed is a notorious offender, but the pollens of other flowers are also irritating to different persons. Boat trips, vacations in mountains or places free from the offending pollens have until lately been the only known means of relief. With the invention and installation of air-conditioners into homes, hay-fever victims can have rest at night and, on days when the air is most polluted, by remaining indoors. Household air-conditioners are of various types and sizes. Some care only for one room, others for the entire house or apartment building. To give relief for hay fever there should be efficient filters to remove particles as fine as pollen. Washing air is a highly satisfactory means of purifying it.

Molds, feathers, wool, dog or cat hairs, dandruff, dust, and other materials of the household set up irritations in individuals especially sensitive to the particular substance. Persons complaining of asthma have found relief from sleeping without a pillow or on pine needle or kapok pillows. Often pine needles have been attributed virtues they did not possess since all that was necessary was to remove the feathers that were the source of irritation. It is now possible in good clinics to have series of tests made when one is suffering from severe irritations and discover by this means the cause of the difficulty.

**Plant poisons.** Plants of which the primrose is a well-known example, cause irritations to certain persons. Poison ivy, poison oak, nettles, and other plants set up severe irritations for people in general. Persons building on uncultivated woodland or other lots may need to rid their yards of poisonous plants, especially if children play outdoors. Occasional persons are so sensitiv-

<sup>16</sup> *Allergy*. An unusual or exaggerated natural sensitiveness to a particular substance, as a pollen, an article of food, a drug, a serum, etc., or to a particular physical agent, as light, heat, etc. (*The New Century Dictionary*, 1938 Edition.)

to poisonous plants that they develop a rash even with coming close but not actually touching them.

**Temperature.** Sensitivity to temperature has not been widely recognized and may be the cause of suffering that could be corrected in homes. A child less than three years of age was found to be so sensitive to temperatures below 80 degrees Fahrenheit that irritated red patches appeared on the skin. No treatment other than a warm climate could be recommended. Toleration of lower temperatures can occasionally be affected by a series of baths in which the temperature of the water is slightly cooler with each succeeding bath. Recommendation of treatment, however, is for medical science.

Long continued low temperatures in houses slow the metabolic rate to a certain extent and in time may be responsible for loss of weight and lowered resistance to disease. Sudden changes of temperature call for quick body adjustments which are difficult for many individuals to make. During long hot summers a number of kinds of suffering from heat takes place, of which death and insanity are extreme results.

**Air pollution.** Pure air is approximately three-fourths nitrogen and one-fourth oxygen, but except in midocean or on mountain peaks there is little pure air, that is, air free from pollution. Dust is common enough, yet the particles are so fine that we fail to see the microscopic bits of rubber off automobile tires; the lint of towels, rugs, and clothing; the soot, smoke, and ashes; the bits of clay, sand, and crushed leaves; flower pollens; dried sputum blown up from streets; invisible scales of human skin; bits of broken hair or fur from coats; molds, yeasts, and bacteria.

In discussing the number of bacteria in air the authors of *The Science of Life*<sup>17</sup> give some interesting figures that show how atmospheres vary.

Hill and Campbell have described a staircase in which there were 750 bacteria in every cubic meter of air before sweeping

<sup>17</sup> H. G. Wells, Julian S. Huxley, G. P. Wells, *The Science of Life* (New York, Doubleday, Doran and Co., 1935), p. 1079.

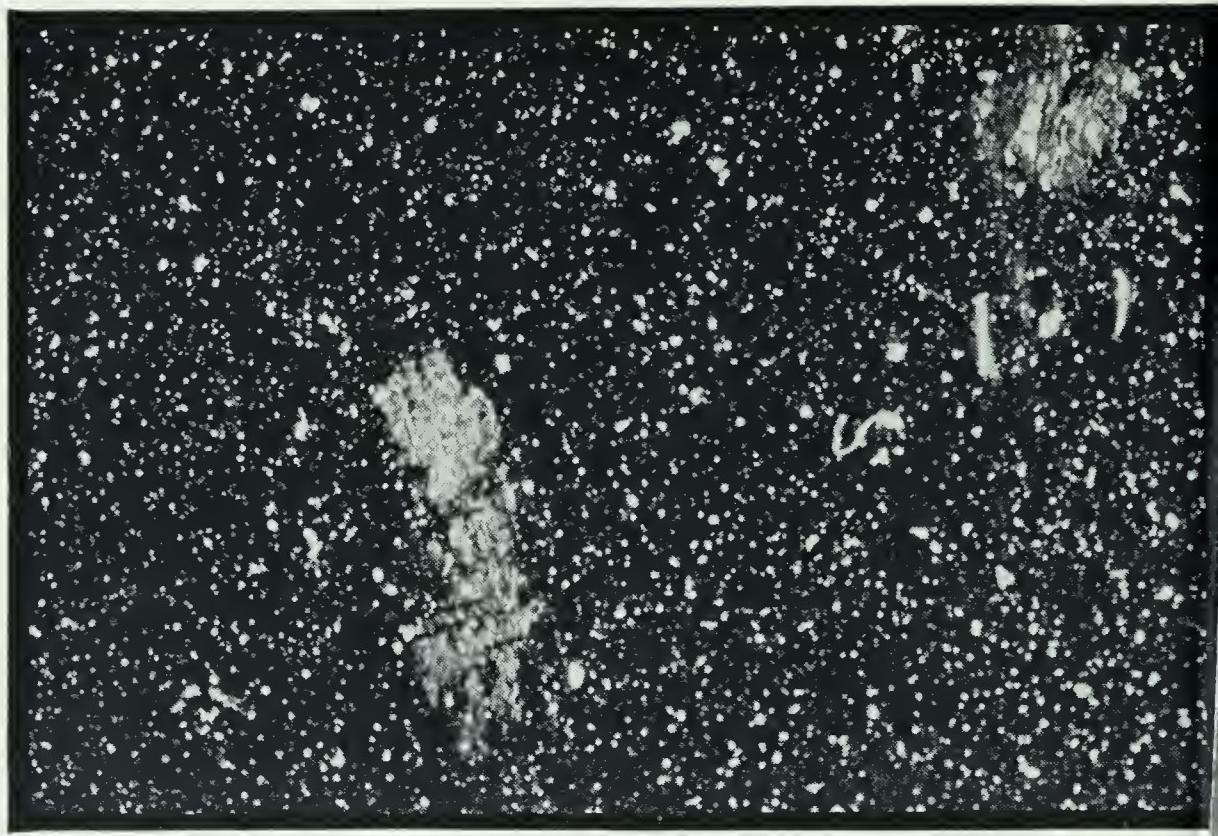


Fig. 13. Air pollution highly magnified.

This is not the Milky Way, but a picture of the pollution of city air as it settled in a "clean" room. Magnified 15 times actual size.

and 410,000 after the carpet had been brushed for ten minutes. In places like crowded picture galleries where, apart from the possible presence of variously infected people, hundreds of feet bring in dust and keep it stirred up, the numbers of floating microbes are enormous; in the Paris salon five million per cubic meter have been counted on a Sunday afternoon. On the high Alps, over 15,000 feet, there are only 4 or 5 microbes per cubic meter; in pure air in mid-ocean a single bacterium has twice this amount of elbow-room.

Fortunately the nasal passages are so constructed and equipped that much of this pollution is caught before it goes on to the lungs. However, when pollution is dense these materials get to the lungs where they set up irritations. Bits of sand, soot, or other solids, as well as some gases, are irritating in the lungs similar to the way they are in the eyes.

To lessen air pollution homes should be cleaned by methods of washing, dusting with treated cloths to which dust adheres.

or by vacuum cleaning. Dust sucked into the cleaner can be emptied and burned. Scattering dust with feather dusters or brush brooms, shaking rugs, beating upholstered furniture, are means of distributing bacteria as well as other forms of atmospheric dirt.

People who must work in dirty air may protect themselves to considerable extent by wearing a strip of coarse muslin tied over the nose and mouth in the manner of nurses and doctors.

Air-conditioning that removes pollution as well as controls temperature aids the healthfulness of homes.

**Ventilation.** Ventilation in the home is a problem of creating atmospheric conditions that help in maintaining normal body temperature, that is, approximately 98 degrees Fahrenheit. We are constantly surrounded by a layer or shell of air, but its condition determines whether or not one can be comfortable. A room of quiet air at 75 degrees Fahrenheit heavily laden with moisture may seem oppressive, whereas circulation of it would produce relief because heat would be carried from the body faster. Those who have come up from a swim on a windy day remember the chill of rapid drying and hence rapid loss of body heat. The feeling of warmth that follows trapping in a blanket is the result of creating a quiet layer or shell of air again and thus conserving body heat.

Because the body generates heat faster during periods of strenuous activity, work rooms may be kept at a lower temperature with more rapid circulation of air. A fan or open window serves. Though circulation of air is important, drafts should be avoided since it is possible to overcool the body.



Fig. 14. Section of the human lung showing in the dark areas atmospheric soot deposit—about the average amount for city dwellers.

especially when one has been perspiring. The purpose of perspiration is to moisten the skin and facilitate cooling; hence a draft may make for violent cooling. Dry air at 63 degrees Fahrenheit may be comfortable for strenuous work, whereas 70 to 75 degrees Fahrenheit is comfortable for reading if one is not too heavily dressed. The temperature of sleeping-rooms can be 60 degrees Fahrenheit or less, since bedding provides a shell of quiet air, thus preventing rapid loss of body heat. Beds, work tables, wash tubs, and ironing boards should be placed where free circulation of air, without drafts, is possible.

It is easy to measure temperature with a thermometer, but accurate measurement of moisture content in air and velocity or rate of movement is inaccurate for most homes. However, it is important to remember the need for proper control of these conditions.

Extremely dry, hot air parches the skin by excessive and rapid evaporation of perspiration and causes real suffering to many people. In winter, houses or apartments heated with hot-air furnaces and radiators often have a dry atmosphere of high temperature that may be relieved by putting cans of water back of radiators, a tea-kettle on the stove, having a number of growing plants about or an open aquarium in the room. An electric fan will give relief even though fresh air is not added to a room.

**Sunlight.** The house is related to health in still other ways. Within recent years it has become common knowledge that sunshine containing ultra-violet light (and it should be remembered that not all sunlight contains enough ultra-violet light to be effective) aids in depositing calcium in the bones of growing persons. Failure to deposit calcium results in rickets. Also sunlight is most important to sanitation since bacteria in general are killed in strong direct sunlight. This knowledge has given added importance to the open porch windows, roof garden, sand-box, tennis court, and garden. The number of outdoor work, play, and rest areas may be increased to advantage in most housing. It should be remem-

bered that atmospheric soot, window-panes, and curtains screen out ultra-violet rays.

**Light as source of eye-strain.** But sunlight as other values needs proper use. Eye-strain can result from reading, sewing, or other close work done in glare as well as dim light. Well-lighted surfaces have bright, well-distributed light. There should be no light flicker, nor dancing shadows. Reading a glossy-paged book beneath a tree whose leaves are sparse and moving may produce eye-strain. Mirror reflections on work areas are tiring. Because most persons are right-handed, light for writing and reading should come from over the left shoulder, thus avoiding hand shadows. Electric light thrown to a cream- or pale-colored ceiling gives even distribution in a room, but is poor light for reading or other close work.

**Other strains related to housing.** With the lengthening of life because of the control of infectious diseases there is an increase in the percentage of cases of heart disease. That housing should bear any relationship to heart disease is often overlooked, yet little thought is needed to see a possible relationship between the planning of houses, building of stairs, and heart disorders. Every additional strain adds to the heart's burden. Movable household objects should be thought out in terms of human lifting capacity or built to be taken apart, moved and reassembled. Freight as well as passenger elevators in apartments and inclined planes or ramps can be used to avoid entirely or to lessen the strain of climbing and carrying. Elevators for small homes that can be installed along the sides of stairs are also available. Like heart cases, crippled persons also benefit from these devices.

**Hernia.** Housing is responsible for still other types of strain and injury. Hernia is a tearing of abdominal muscles. When a fold of bowel is forced into the breach severe pain follows. Though in many instances hernias are known to follow abdominal operations or childbirth, they also come from over-exertion and heavy lifting. Men who lift heavy trunks, packing boxes, pianos, and stoves frequently injure themselves. Elevators, inclined planks, and pulleys aid furniture-movers. Un-

packing, carrying parts to upper floors, and reassembling are other means of avoiding the strain of heavy lifting.

**Noise as an irritation.** Noise is another of the irritations common to homes. Banging doors, wooden-heeled shoes on hard floors, careless handling of dishes and pans, blaring radios, quarreling and crying children, harsh, raspy voices, nervous giggles, noisy practising on musical instruments, and others might be named. Rugs or carpets on floors, linoleum, curtains, draperies, wall hangings, and overstuffed furniture, as well as porous wall materials, made especially for noise-deadening, absorb sounds. Nonporous, hard, and metallic materials all reflect and intensify sound. Rubber or felt pads can be tacked on door jambs when children cannot be trained to close doors quietly. Felt pads are sometimes used between plates and felt or tennis flannel-lined boxes used for silver. Rubber heels on shoes make walking less noticeable. Muffled door and telephone bells as well as more musically toned bells may be used. Telephone booths and silencers over the mouth-piece of instruments eliminate telephone conversations from rooms. With thoughtful planning a large number of the most annoying household noises can be modified or eliminated.

#### INSPECT YOUR HOME FOR HEALTH AND SAFETY

What is the average number of persons per room? (Closets, halls, dinettes, dens, etc., should not be counted as rooms.)

What is the number of persons per bedroom?

What is the age and sex of persons per bedroom?

What is the number and kind of common living and service rooms?

How much lot space has the building?

How much cross ventilation is possible by means of windows and doors?

How many hours per day does sunlight enter each room of the house?

Do the house areas used for daytime work and living get the sunshine or is it in closets, bedrooms, etc.?

How many hours per day could you read a newspaper in each of the rooms?

Does the building have a good foundation far enough up from the ground to provide ventilation beneath?

If there is a basement, is there good drainage?

Does the house ever have a damp, moldy odor?

Is there plumbing? If so, for what sanitary needs does it provide? Is it in good repair?

If there is no plumbing, in what condition is the privy?

What should be done to make it sanitary? Does it need chloride of lime in the pit? Has it screens at the base, on windows and doors?

Are there pools of stagnant water near the premises?

Is trash regularly burned in a furnace, incinerator, or outdoor trash burner?

Is garbage regularly wrapped and kept in tight containers until collected and burned?

Are glass bottles, tin cans, etc., regularly picked up and put in covered metal or wooden containers until they can be hauled away?

Are outbuildings permitted to decay? Are they repaired, or torn down if worthless?

Are fences kept in repair with no broken wires, nail points, or splintered boards to cause injury?

Is all the plaster safely on the walls? (Remember that new plaster may fall when improperly put on.)

Has there been any weakening of timbers from termites, rats, or rotting of wood?

Have earth movements and settling of soil caused sagging of walls or other parts that are needed for safety?

Are stairs safely built? If old, are they in good repair?

How many exits are provided by the floor plan?

Is there need for fire escapes? How many? Are exits always kept free of boxes, toys, or trash?

Are there screen windows and doors for every window and door needed for ventilation?

Are window frames safe for those who must be supported while washing windows?

Do storm windows and doors have substantial hinges and catches so they cannot be torn loose in wind storms? Are shutters also safely hinged and fastened?

Are porches and walks kept free of ice and snow?

If you live in a tornado country, are your storm cellars or caves always in good condition and ready to use?

If you live in an earthquake country, are the walls of your building constructed to withstand earth tremors and shocks?

If you live where there are heavy snowstorms, do the roofs slant sufficiently to prevent the collection of great weights of snow that will crush the roof?

Is the building of wood, plaster, brick, cement, or stone? How easily could it burn?

Are all papers, old clothes, sawdust, and other combustible materials kept picked up and frequently burned or hauled away?

If gas is piped into the house, are all mains and equipment free of leaks?

If the house is wired for electricity, was standard safety wire used?

Is a fuse box properly installed with only the amount of current on each line that can be safely carried?

Do persons ever resort to the use of pennies or other metals when a fuse blows out? Why is this dangerous?

Is the household equipment frequently checked for safety?

Are poisons, firearms, or other dangerous materials kept in locked places or where there can be no danger from them?

### CHECK YOUR OWN SANITARY PRACTICES

#### *Food*

Are foods kept covered from dust and other contamination?

Are there facilities for keeping foods cool enough to prevent the rapid growth of yeasts, molds, and bacteria? 35° to 45° F is satisfactory for refrigerators.

Are parings and other waste foods collected and put in proper garbage containers?

Are garbage containers kept clean by frequent scrubbings and by wrapping garbage put into them?

Is the cook careful to wash hands before starting to work, and frequently during process of cooking?

Are persons who handle foods particular about body cleanliness?

Are they also careful to use separate silver for tasting purposes?

Are egg beaters, food grinders, graters, and other similar appliances taken apart and thoroughly washed after using?

Are bread boards, table tops, stove trays, sinks, shelves, and the like, washed as part of the dish-washing process?

Are crumbs swept from dining-room and kitchen floors after meals?

Are kitchen and other floors where soft food may be spilled frequently scrubbed? Are the corners as well as the center of the floor cleaned?

If foods are stored in basements are there properly built trays or root vegetables and raw fruits?

Are these foods looked over from time to time and rotten potatoes, apples, cabbages, and so on, thrown out?

Is there free circulation of air through vegetable cellar and possibility for keeping it dry enough to prevent molding?

#### SUGGESTIONS FOR PRACTICAL APPLICATION OF STUDY

Using the suggestions of the section that follows as a *starting point*, make a study of dish-washing in your own home and formulate a procedure to insure sanitary dish-washing.]

Permit no dirty dishes to stand in sinks, cupboards, or refrigerators. If for lack of time dishes cannot be properly washed with soap and water, rinse well and put to soak.

Wash dish cloths, towels, dish brushes, and so forth regularly with soap and rinse thoroughly. Spread cloths to dry in sunshine when possible.

Wash flat surfaces such as table tops, shelves, stoves, regularly as dishes are washed.

Teach every member of the household to rinse away food and soak all dishes, silver and glassware for washing. Wash thoroughly in soapy water and rinse in clear hot water.

Clean food cupboards and refrigerators frequently to prevent the accumulation of decaying food.

"Over the Dish Pan," Circular 106, Extension Service, The University of Maine, Orono, Me., gives a procedure for washing dishes in rural homes. What steps are designed to insure sanitary cleanliness?

The following topics and questions are suggestive for those who are interested in studying a home problem by means of a project.]

*Plumbing*

Are there any leaks, particularly the slow kind that keep walls damp? Describe them.

Are there any corroded spots on the pipes, especially at joints?

Are the plumbing traps properly filled with water to prevent the escape of sewer gases? How can you tell?

Are there proper basement drains that are never clogged? How can you test?

Are sink and ice-box drains frequently cleaned with hot water to which soap, sal soda, or other cleansing agent has been added?

Does the house have pipes from gutters and eaves that conduct rain and melting snow a sufficient distance from the house to prevent rotting of the building and dampness in the basement?

Are gas pipes free of leaks? Do all the stove vents cut off completely? How can you inspect?

Is there any possible escape of gas from refrigerator?

Are members of the family careful to keep hair from clogging lavatory and bath-tub drains?

If there is no slop sink and scrub water is thrown down the toilet, is care taken to see that there are no pieces of soap or other sizable refuse put in?

If there is an ice-box, is the drain tube always removed and well scrubbed when the box is cleaned? Is the drain from the building also well flushed with boiling hot suds?

Should the plumbing of your home be improved? How? How much improvement is possible?

*Personal Hygiene*

Have all members of the group been trained to use individual wash cloths, towels, tooth or body brushes?

If an individual contracts athlete's foot, scabies or other communicable disease, is he careful to use his own wash bowl or very carefully scrub a tub that must be used by others while he has the disease? Does he consult a physician to be sure the disease is cured?

If individuals have sore throats, colds, or other communicable diseases, are they careful to burn paper handkerchiefs, rags, or other waste materials that might be a means of spreading the disease?

What questions relating to personal hygiene and home sanit-

ion can you add to this list? Review of the chapter will give you points in addition to these suggested by the questions.

### *Heating and Ventilation*

What is the temperature of each room of the house taken at intervals of one hour?

How much variation occurs from day to day? From month to month?

Secure a barometer and take daily readings. How prevalent foggy weather? Are artificial means of getting moisture needed?

What type and how many openings in the house provide for circulation of air? Check fireplaces, window frames, and the like for drafts or air leaks.

What type of fireplace, stove, or furnace is used for heating the house? Study descriptive circulars and air conditioners to understand how they work.

Could the ventilation of your home be improved? How?

### QUESTIONS FOR DISCUSSION

1. When and where are fire escapes essential on dwellings? In what way may indoor stairways serve the same purpose as fire escapes?
2. Why should it be illegal to keep objects of any kind on fire escapes?
3. Why forbid children to play on fire escapes?
4. What buildings that you know are of fireproof construction? How does this differ from ordinary construction?
5. What city ordinances apply to buildings in your city or town?
6. If you were building a house, barn, and garage in the center of a sixty-acre farm, what agency might influence your building so far as safety from fire is concerned? Why would high individual standards of safety be of greater importance to a builder in the open country than in a city?
7. Why is it reasonable for a city to demand that the plans of buildings be submitted to a city Bureau of Housing or a Department of Health before permission is granted to break ground for the building?
8. Investigate the regulations of your own city or community to determine whether or not you could remodel your house without a building permit.

## REFERENCES

- EMERSON, Alfred E., and FISH, Eleanor, *Termite City* (Chicago, Rand McNally Co., 1937).
- "How Safe Is Home?" Metropolitan Life Insurance Co. A booklet showing how to prevent accidents.
- JAMES, Darwin R., chairman. A Committee Representing New York State Conference of Mayors, State Department of Health and State Board of Housing. *A Housing Code Recommended for Use by Municipalities of the State of New York* (Albany, J. B. Lyon Co., 1930).
- Life* magazine for May 9, 1938. Pictures on page 49 show healthy lungs, also effect of silicosis.
- LOSH, Rosamond, "The Child's Greatest Hazard," *Practical Home Economics*, October, 1935, p. 292.
- MAETERLINCK, Maurice, "The Grim Society of Termites," *Reader's Digest*, December, 1934.
- National Board of Fire Underwriters, 85 John Street, New York.  
"Dwelling House Pamphlet, a code of suggestions for construction and fire protection, 1928." \$20.  
"Recommended Building Code," 1934.  
"Standard Ordinance for Chimney Construction, Suitable for Use in Cities and Towns of any Size or as a State Law," 1927.
- National Fire Protection Association, 60 Batterymarch St., Boston.  
"Suggested Ordinances Prohibiting Wooden Shingle Roofs.  
(Gives a list of cities that prohibit the use of wooden shingle within the corporate limit.)  
"Specifications for Private Residences." \$.15.
- National Resources Committee. Interior Department Building, Washington, D. C., "Model Zoning Law or Ordinances."
- "Relation between Housing and Health," Public Health Service Reprint No. 1656 (1936).
- ROGERS, Frazier, "Water and Sewerage Systems for Florida Rural Homes," *Bulletin* 46, Agricultural Extension Division, Gainesville, Florida.
- SHREVE, Florence, "The Relation between Housing and Health," *Practical Home Economics*, February, 1938, p. 45.

## 4

## SOCIAL SIGNIFICANCE OF HOUSING

THOUGH made of inanimate materials, houses express the life of individuals or groups that use them. Some are cozy; others bleak and cold. Some are ramblingly big and express free and easy existence, whereas others are cramped, blinds pulled, and wear a dour expression. As an environment for living, houses and apartments take on evidences of the life carried on inside. The problem of planning and managing buildings for homes is to understand the extent to which housing is related to social living and how buildings may contribute to desirable social life.

In the last chapter you saw ways in which housing is related to the safety and physical health of human beings. This kind of relationship is fairly tangible, at least in the case of safety. Now if we were merely animals rather than human beings, attention to physical health might be enough. We should strive for nothing further than a safe, disease-free, or sanitary house. But even in the last chapter you began to see how overcrowding irritates individuals, causing emotional disturbances. It is very human to want such values as privacy, social security, a sense of possession, a place to entertain friends, and beauty. Like clothes, housing gives values beyond protection, comfortable temperature, ultra-violet light, and so on. Housing is a part of social life. It can add to or detract from a feeling of being one with a group.

Many of the questions that will occur to different members of the class while reading this chapter will be controversial, that is, questions that can be discussed at length.

Different persons will have different opinions based upon personal experiences. There is no question that housing does play a part in the social life of human beings, but there are numerous questions as to just how in different cases and to what extent. The illustrations of the chapter show a few individual situations in order that you may see how housing can enter into the considerations of specific persons and groups, and the floor plans show some of the ways in which housing helps to determine the pattern or manner of living in different buildings. After reading, discuss as a group such questions as:

1. Do you feel that you belong to some group? What part do you play in it?
2. The family, as a social group, is small with many intimate contacts. Why are both thoughtful planning of buildings and furnishings, as well as courtesies, of especial importance?
3. How do attitudes affect the way people will live in or care for property?
4. Does ownership of property insure interest in keeping it up? When may ownership be the incentive for good standards?
5. Are little children in a position to understand why they are afraid of something about a house or in the community? How many of you remember a fear you once had? Do you know why?
6. What is the social significance of giving names such as kitchen, bedroom, bath, closet, laundry, milk room, shop, studio parlor, living-room, library, etc., to rooms?
7. To what extent can persons who rent make use of floor plans?

Recognition and self-respect. To survive physically we must have food and protection from violence and disease. To survive socially individuals struggle for recognition and self-respect. Recognition may come within one's family group or local community, or it may be wider in scope. Most people however, want to feel that they are a part of and have a place in some kind of social life. This means finding a balance between conforming to and differing from the group. Like cr

ating balance in the composition of a picture this kind of social balance is a part of living. Clothes, houses, and entertainment all furnish ways of expressing it. The following quotation which shows one person's ideal is an attempt to strike such a balance in adjusting to a community.<sup>1</sup>

"My profession," said the young doctor to his architect, Silas E. Nelsen, "does not advertise, but I realize that if my home can reflect good taste and have about it a certain air of sincere solidity and be unusual without being radically so, people will discuss it. My home will advertise me."

**Social adjustments.** Much of the advertising of houses and house furnishings aims to make people buy because the house or its furnishings will do something for their position in the family or community. If all the houses of a community have electric lights, the family that must use kerosene lamps is undesirably different. If all the homes are palatial, individuals of the community feel they must have palatial homes in which to entertain. Perhaps their chief aim is to impress their friends. But if most of the homes are humble, one palatial residence may create jealousies that put the owner in a position of being undesirably isolated from the group. It is a little like wearing half hose, make-up, jewelry, etc. If all the school girls wear half hose, the child who must wear long black cotton hose is likely to feel unpleasantly conspicuous, but if most of the girls wear long black cotton hose and one sets herself up as superior because she has silk chiffon, the chances are good that bad feeling will follow. Houses like other possessions contribute to the social adjustments that individuals and families make.

The relationship between manner of living and housing is subtle and complex as one can see in the account of a girl who knows how her mother was aware of it.

My mother had keen insight and often protected me in ways that I couldn't understand at the time. Whether she was right or wrong no one can say, but there was no doubt about the honesty

<sup>1</sup> John Normile, editor, *Building Your Home* (Meredith Publishing Co., 1938), p. 15.

of her motives, and I developed a deep respect for her integrity.

I grew up in a college town and because I was the oldest of a large family in which there had never been money enough for our needs, I went to work at the age of sixteen. Typing in the law school paid the highest rate and because I had been accurate and fast in high school practice I was fortunate in being accepted as a stenographer in the office of one of the law professors.

It was the law school of a man's college so there were no girls about except those of us who were employed in offices. I was good natured, occasionally witty and free to use enough of my wages to buy clothes in which I appeared well dressed. Many students asked for dates and my mother did not object to my going with them occasionally, but insisted that if I were to continue having dates with any one boy he must be from among our friends in the town. She would say that she did not want me to go with the boys who came from homes of wealth because I might think I was in love and want to marry. Repeatedly she would explain that the problem of managing a big home and fitting it into the social life of a wife who was expected to help her husband gain standing and prestige was something for which my home had not trained me. She pointed out that because I was sensitive, proud and devoted to my family, I would suffer innumerable heartaches from the slights and rebuffs which I would encounter in trying to give parties and entertain where I did not feel myself to be a part of the group.

Unfortunately for me the furniture in our home was not only scarce but shabby, and while there was a fine spirit of freedom and loyalty among us we were always crowded into less space than we needed, so there wasn't the slightest possibility of learning to entertain except by bringing people in to watch us live. When I failed to understand and tried to argue, my mother would say with the utmost patience and kindness that she realized the problem was a subtle one and hard for me to understand but that if I would trust her she felt sure I should some day come to know why she talked as she did.

After two or three years I was transferred to a still better paying position in the office of the father of a girl with whom I had gone to private day-school when one of my aunts was sending money for my tuition and clothing. Gretchen and I had been very good friends in grade school and when summer came and she returned from college, I was invited to visit in the family summer

home. It was then that I began to grasp what my mother had been talking about. Being in the house I could see what a tremendous responsibility Gretchen's mother assumed and how tactfully and smoothly she handled almost every situation that arose, from settling differences between the cook and butler to preventing Senator A's ex-wife and her husband from coming into the library where tea was being served to Senator A and his second wife.

The house was built on three sides of a garden court with the library on the side farthest from the front entrance. When Gretchen's mother saw the name of the calling card that the butler presented to her, she brought Gretchen and me more definitely into the conversation, excused herself, crossed the court, and closed the broad French doors of the front room as she entered. It was so casually done that neither Gretchen nor I suspected there could be any motive back of closing the doors, and since the guests were faced away from the doors there was no chance that they could have known who called. Later Gretchen's mother returned to join the conversation in the library. Being a guest, I had an opportunity to observe how graciously Gretchen's mother managed the situation but didn't realize until later when Gretchen explained how much professional and social embarrassment she had saved Gretchen's father.

At dinner parties Gretchen's mother knew who were especially good friends and whom to seat beside each other; she knew whom to invite as guests for the same week-end and the special tastes of each. There was little discussion except perhaps, "I think we better not plan fishing for the X's. You know how they feel about cruelty to animals and fish are animals to them. They could never enjoy hooking a fish."

Gretchen's mother had been raised in a home of wealth. She had always been part of a social group that our family regarded as extremely rich and free to do just as they pleased. But they were never really free. Even in their summer home life was elaborate and strenuous. I doubt whether my mother worked harder or worried more, but mother's worries were of a different kind. While mother was going out at night to work and supplement father's too meager wage, Gretchen's mother was giving a dinner party, attending necessary club meetings, trudging about stores gathering up wardrobes for the family and using the earnings of the inheritance her father had left to supplement what, to me,

seemed the huge income of her husband. All this was to preserve the family prestige. I came to see that often there was both economic and social struggle to maintain what they regarded as their place in society.

My mother was quite right when she said that I had received little training for running a big house, and I would lack the feeling of social ease which comes from long association. Since I did not belong it would be something very definite and possibly distasteful for me to learn.

#### HOME-MAKING A SOCIAL PROCESS

Home-making is a social process carried on in groups varying in size, but small as compared to other social groups such as clubs, churches, or schools. It is distinguished also by the extent to which the intimate and highly personal aspects of life are involved. Because contacts are more constant and intimate in the home situation, one comes to understand persons by their actions quite as much, often better, than by their conversations.

There are closely knit family groups dominated by intelligent interest in the development of each and all of the members. Here the house is a means to well-defined ends. There are other family groups where the house, no matter whether beautiful or sordid, is more or less accepted as a matter of fact. The group lives in it because individuals were born there, or because there was no other place available when they came to move, and like birds they settled in for the season only to flit again. There is a relationship between group life and house, but it is often not one designed to serve definitely understood needs or desires. Ideally persons should know what they need or want in housing as well as in food or clothing.

**Group patterns of living.** Not only does one person develop sets of habits that distinguish him, but groups also have fixed habits. They are the actions one may expect to find regularly. In one family every one has breakfast at the same hour six days of the week and at a different but regular hour on Sundays. It is the accepted pattern, and no one questions

whether it is right or wrong, or whether it serves each member in the best possible way. In one family of six the mother sits through five different breakfasts from 6:30 A.M. when her husband eats, to 8:15 when her high-school-aged son has his breakfast. She is the medium through whom the other members have their contacts. She keeps up with interests among individuals who are isolated except at Sunday breakfast when they all meet. This is a weekly event.

In one household every one meets in the kitchen and no one would feel comfortable to discuss really personal problems except in the kitchen, while in another family an upstairs library and general living-room is the scene of family confidences. In one family much is made of birthdays, while in another the parents or grandparents are likely, if their birthday is celebrated, to admit that it is the first time in their life.

These ways of living together grow fixed into social patterns, so definite that they are like styles. They seem to be the right, the proper way of doing, and everything else seems wrong. If they are happy at home, very young children think that it is the best place on earth. It may or may not be, for happiness is a human capacity, and one person can be happy with what would make another wretched.

Social patterns of family groups have much individuality though there are elements in common to all. One group may be very demonstrative and exhibit its unity by always kissing family members both when leaving or coming home. Kissing comes to be as common as shaking hands except that only related persons kiss. In another family kissing is very rare, symbolizing deep emotion. In some families all responsibilities are dispatched with an air of gaiety though they are as important and serious as those of other groups where a sterner atmosphere prevails. In some families there is much romping and playing among adults as well as children, while in others romping even among children is not tolerated. There may, however, be affection and kindly feeling among them. Only intimate contacts with family groups show the outsider the

true nature of the feelings and the depth of loyalty among them.

Likewise, patterns of action and thinking become fixed in communities so that families who do not build their houses, eat their meals, go to the same churches or clubs, are looked upon as different and hard to understand.

#### INDIVIDUAL FAMILY HABITS CONSPICUOUSLY REFLECTED IN A HOUSE

In twenty years the house had not been painted. The weathered siding was warping and splitting in spots. An illy proportioned and unroofed porch, supported with bending two-by-fours, extended across the front and part way along one side. The steps were wobbly with no hand rail. To the street, a ceiling-height, uncurtained window of enormous width gave full view to the large front room and library beyond. Why one should distinguish between these rooms as front room and library was not clear for the walls of each were lined to the top with book shelves filled to overflowing. Except for two non-functional free-standing pillars, fashionable at the turning of the century, there was no division between the rooms. At first glance from the street one felt sure an old house had been converted into a book shop, yet customers never went in or came out.

On dark, winter nights the exterior view was obliterated and brilliant flames in the fireplace at the rear of the library gave a mellow glow. The big rooms seemed transformed. One's attention was no longer focused on bleakness. Lamps on reading tables near comfortable chairs showed clearly that family members were devoted to reading during their leisure hours. Late into the night an occupied chair or two would be the only lighted spots in the great rooms.

Every group leaves the stamp of its use on buildings, but when the use is identical from house to house, one is apt to become unaware that an influence exists. Each house of Street A, for example, may be built with the same floor plan. There is a living-room, dining-room, kitchen, two bedrooms, bath laundry tubs in the basement, and an attic. The few stiff living-room chairs indicate that it is used chiefly when a calle-

comes, and the dining table cover and decorations, rarely removed, show that meals are usually served at a table in the kitchen rather than in the dining-room.

Living-room, dining-room, bedroom, bathroom, closet, laundry, kitchen are familiar room names. They come from well-known family activities, and provide for sleep, body cleanliness and elimination, food preparation and service, entertaining callers, laundering, and storage of clothing or household articles not in common use.<sup>1</sup> Builders incorporate these rooms according to the way it is common for people to use and demand them. When family activities once commonly a part of the house, such as funerals, weddings, large receptions, etc., are transferred to funeral "parlors," churches, or club-houses, there is no longer a need for adding specially designed rooms to individual houses. The one-room kitchenette apartment represents a maximum of shrinkage in space designed for more than sleeping-room purposes. The farm house with specially planned work rooms or buildings shows the influence of keeping the income activities definitely a part of the household arrangements. In rural houses of a cold climate there may be vegetable and fruit cellars because many foods are stored from autumn to spring. A milk room or house shows dairying to be one of the income activities of the farm.

In riding through northwest Minnesota travelers are often curious about small detached buildings, with chimneys, that are common in certain communities settled by Finnish people. These are bath houses where stones are heated and water poured over them to create a steam bath atmosphere.

**Adjustments.** Consciously or unconsciously, families are always adjusting houses to their way of living. The next illustration shows an adaptation to haphazard and unsatisfactory group life. The relation of the house to human development and family enjoyment seems never to have been solved.

Each day as I passed down the street I observed that at morning, noon, or night the activity was in the kitchen. In the morning the atmosphere reeked of frying sausages and griddle cakes,

<sup>1</sup> See page 188.

at night of cabbages and onions. From the window facing the street the crowdedness was evident. The stove top covered with pans, kettles, and wash basin; the common towel twisted about a nail; coats and hats hung along the wall; and papers piled high in a corner were indications of how the general family activities had been forced into this one room. That the mind of the mother was as badly cluttered as the room was also evident even to the pedestrian, for shouts of "Johnnie, you didn't put on your rubbers. You come straight home from school tonight. Don't you let me hear of your going to Abner's pool hall again," were cut off by Johnnie's sharp bang of the door as he escaped, coat in hand, swallowing the last morsel of his breakfast.

At night the coal oil lamp flicked over an oil-cloth covered table that was piled high with dishes, bags of flour, and other supplies. Never was more than a corner of the table cleared, since it was not the custom for even two members of the family to eat together.

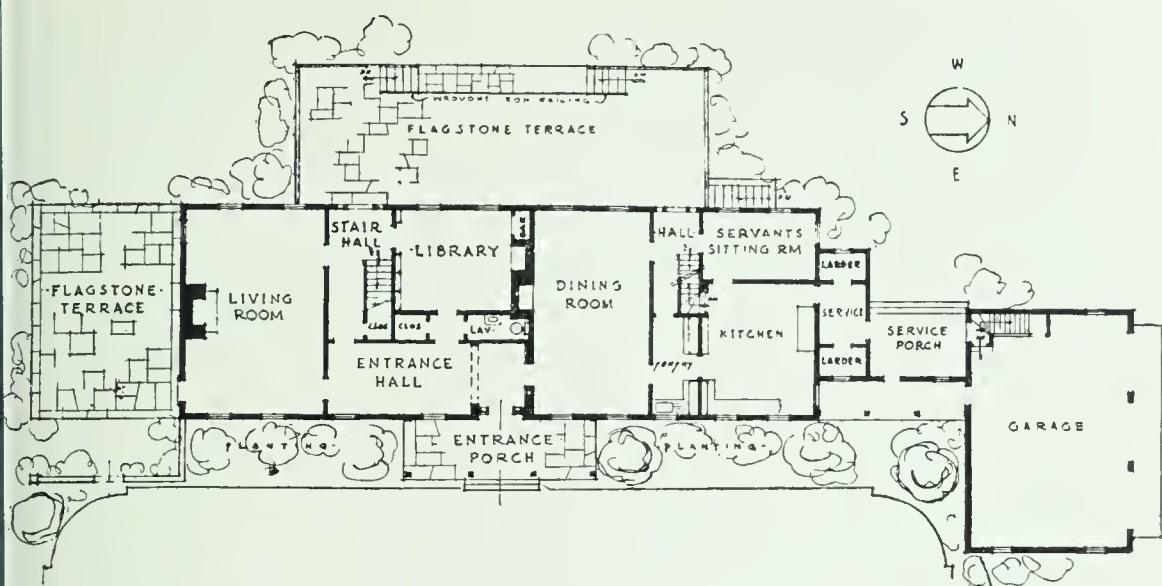
There were other rooms but one saw a light through these windows only when it was carried by some one on his way to the upstairs bedrooms. In all the months that I passed this house there was no evidence of gaiety or pleasure. Nor did the tones of voice and escaping sentences bespeak mutual understanding among any of the members, unless perhaps it was understanding of how to avoid rebuff or defend oneself in a sharp word battle.

#### A DIFFERENT ATTITUDE TOWARD GROUP LIFE AND THE USE OF A HOUSE

"We never can have that kind of a puppet show without a work shop," said one member of a self-organized, high-school drama league.

"We can work in our basement if those of you who do not know how to use tools will promise to leave the work bench alone. My father doesn't mind having the tools used by people who understand tools and will put them in place when they have finished," answered Jane who lived in a much used house where every one seemed to feel free to do what he or she pleased.

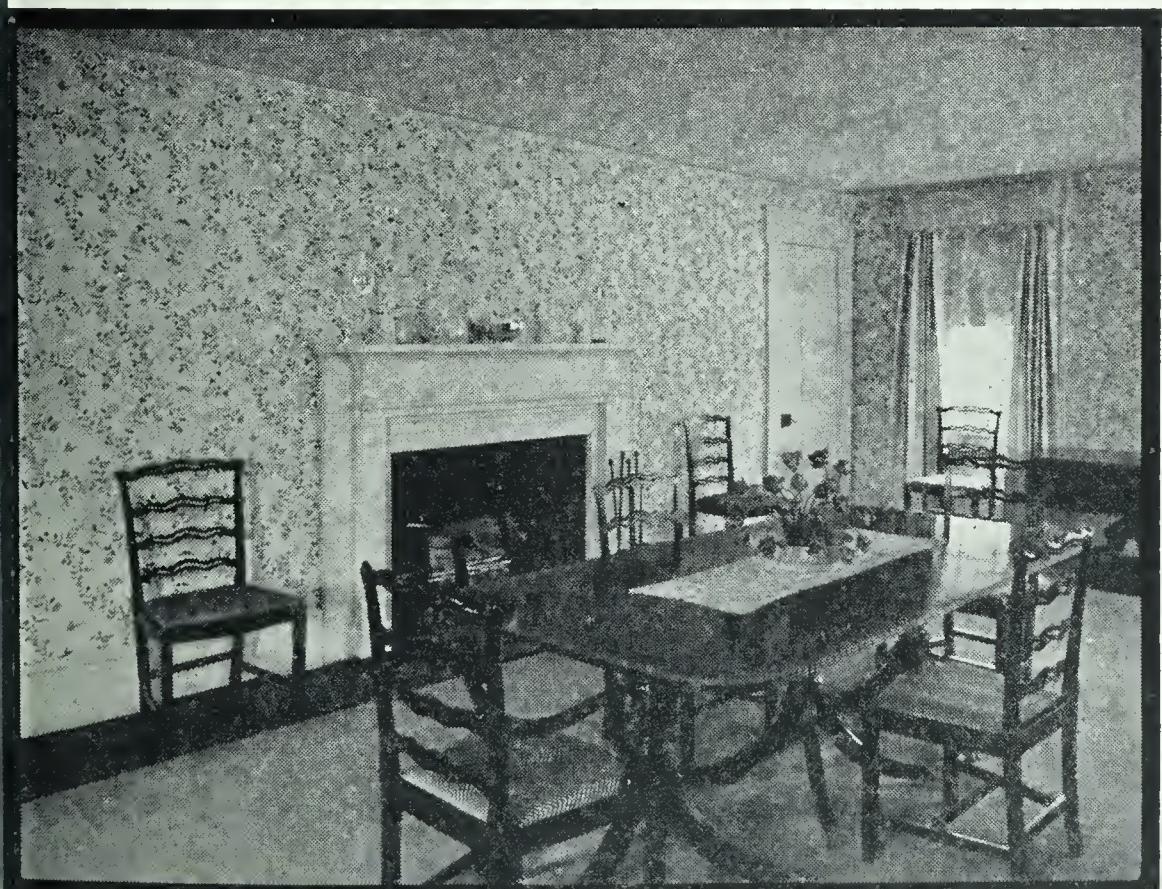
The house though far from new had undergone such a long series of changes that one was inclined to place it among the modern if not the new houses of town. Built on the side of a hill some excavating of the yard had made possible a drive to the



*Courtesy of Bradley Delehanty, Architect.*

**Fig. 1. A remodeled farm house.**

But no longer a farm as the sophistication of the plan shows. The flagstone terraces and stairs to a lower yard level show leisure for the use of the outdoor living areas. The large rooms provide generously for entertaining and privacy. The lavatory and closet are conveniently placed and the pleasant sitting room for employees is thoughtful. The historic character of the house and the dignity in which it has been furnished is shown in the picture of the dining-room below.



*Courtesy of Samuel Gottscho.*

garage which occupied space taken from one end of the basement. The drive had been planned wide enough for a cement walk along one side. This walk lead to a basement playroom door near the garage entrance. A work room with bench and tools was between the garage and playroom. The playroom was easy of access and far enough removed from the rest of the house so that noise and disorder did not interfere with the regular household activities. There was no need for trooping through halls and living-rooms to get to the playroom.

"I can invite you to work at our house but if you come, there must be a committee to clean up, and I mean really clean up, because it will be my job if there is not a committee. Mother will let me bring her portable sewing-machine downstairs to make costumes and stage curtains and we can leave the stage set up and all our work things in the playroom but no clippings or shavings can be left about because there are others of the family that like to play or work down there too."

At once the members of the committee sensed the feeling that dominated the organization of this family group. There was freedom with respect for the rights of others and a sense of responsibility for the care of property.

This situation was not unlike the more familiar one of the next illustration.

I have never seen such a change as took place this autumn in the high-school library. For years I have gone from time to time to work in it and I have always been impressed by what appeared to be both perfect order and freedom. There was moving about the room, but it was to get a book from shelves and take it to be checked. There was occasional whispering but it was to ask question and not to carry on a conversation. Every one seemed to have a purpose both in coming and staying in the library. Student knew where to find books, magazines, ink, pencil sharpener, and so forth, and there was adult dignity.

That was all changed this fall, and I found it hard to read without constant annoyance from groups of gossipers first at one table and then another. Two or more pupils would go to the same shelf, but it was obviously not so much for books as an opportunity to stand and talk until reprimanded by the librarian. Apparently the new librarian did not have the reading interests ar-

needs of the individual pupils well in mind for those who asked questions asked them not so much for help as to occupy the librarian's time and prevent her from seeing disturbing groups in other parts of the room. An infantile attitude had replaced the dignity of the previous year, yet there was no greater freedom. In fact, there was less, for pupils were being sent daily to the principal's office for discipline. This only added to the conversation and discontent of others. The old, businesslike, orderly freedom in the use of the room and its equipment was gone.

**Influence of building upon individual.** It is well known that many childhood fears develop in relation to houses but few are more clearly presented than that of Lord Frederick Hamilton in his own words.<sup>2</sup>

Looking down the long vista of sixty years with eyes that have already lost their keen vision, the most vivid impression that remains of my early childhood is the nightly ordeal of the journey down "The Passage of Many Terrors" in our Irish home. It had been decreed that, as I had reached the mature age of six, I was quite old enough to come downstairs in the evening by myself without the escort of a maid, but no one seemed to realize what this entailed on the small boy immediately concerned. The house had evidently been built by some malevolent architect with the sole object of terrifying little boys. Never, surely, had such a prodigious length of twisting, winding passages and such a superfluity of staircases been crammed into one building, and as in the early "sixties" electric light had not been thought of, and there was no gas in the house, these endless passages were only sparingly lit with dim colza-oil lamps. From his nursery the little boy had to make his way alone through a passage and up some steps. These were brightly lit, and concealed no terrors. The staircase that had to be negotiated was also reassuringly bright, but at its base came the "Terrible Passage." It was interminably long, and only lit by an oil lamp at its far end. Almost at once a long corridor running at right angles to the main one, and plunged in total darkness, had to be crossed. This was an awful place, for under a marble slab in its dim recesses a stuffed crocodile reposed. Of course in the daytime the crocodile pretended to be very dead,

<sup>2</sup> Lord Frederick Hamilton, *The Days Before Yesterday* (New York, George H. Doran Co., 1920), pp. 16-17.

but every one knew that as soon as it grew dark, the crocodile came to life again, and padded noiselessly about the passage on its scaly paws seeking for its prey, with its great cruel jaws snapping, its fierce teeth gleaming, and its horny tail lashing savagely from side to side. It was also a matter of common knowledge that the favourite article of diet of crocodiles was a little boy with bare legs in a white suit.

Even should one be fortunate enough to escape the crocodile's jaws, there were countless other terrors awaiting the traveller down this awe-inspiring passage. A little farther on there was a dark lobby, with cupboards surrounding it. Any one examining these cupboards by daylight would have found that they contained innocuous cricket-bats and stumps, croquet-mallets and balls, and sets of bowls. But as soon as the shades of night fell, these harmless sporting accessories were changed by some mysterious and malign agency into grizzly bears, and grizzly bears are notoriously the fiercest of their species. It was advisable to walk very quickly, but quietly, past the lair of the grizzlies, for they would have gobbled up a little boy in one second. Immediately after the bears' den came the culminating terror of all—the haunt of the wicked hunchbacks. These malignant little beings inhabited an arched and recessed cross-passage. It was their horrible habit to creep noiselessly behind their victims, tip...tip...tip-toeing silently but swiftly behind their prey, and then...with a sudden spring they threw themselves on to little boys' backs, and getting their arms around their necks, they remorselessly throttled the life out of them....

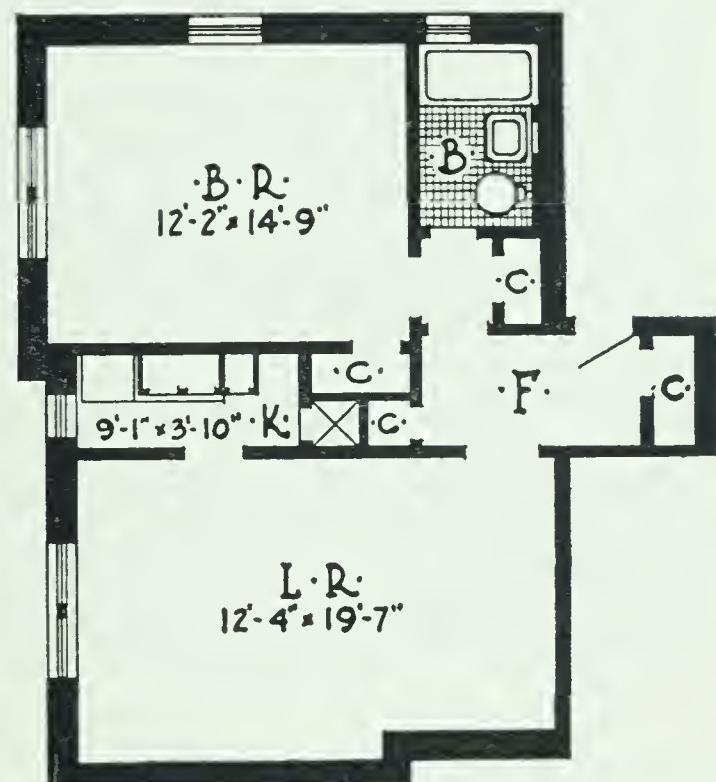
A peculiarly bloodthirsty gang of malefactors had their fastnesses along this passage, but the dread of being in the immediate neighbourhood of such a band of desperadoes was considerably modified by the increasing light, as the solitary oil-lamp of the passage was approached. Under the comforting beams of this lamp the little boy would pause until his heart began to thump less wildly after his deadly perils, and he would turn the handle of the door and walk into the great hall as demurely as though he had merely traversed an ordinary everyday passage in broad daylight. It was very reassuring to see the big hall blazing with light, with the logs roaring on the open hearth, and grown-ups writing, reading, and talking unconcernedly, as though unconscious of the awful dangers lurking within a few yards of them. In that friendly atmosphere, what with toys and picture-books, the

earful experiences of the "Passage of Many Terrors" soon faded away, and the return journey upstairs would be free from alarms, or Catherine, the nursery-maid, would come to fetch the little boy when his bedtime arrived.

**Influence of building upon manner of living.** Historically, houses separated man but little from the soil and direct effects of weather. Primitive shelters were built on the ground and either a tent flap or rude door separated the interior from the outdoors. Wild fruits, seeds, and game were at hand for those who would sick and hunt. Later ardens about the house kept a more expendable supply of food near-by.

As small towns developed and work became specialized, one might be employed beyond the private lot, but also have a garden to supply part of the food. Labor plus seeds would yield a food supply for those who knew how to manage. Many families depended upon the household garden and barnyard for everything but salt, sugar, flour, and spices. Even eggs and dairy products were supplied if the house had as much as an acre or two of ground. The production as well as preparation of food was, and still is, an important household task in such situations.<sup>3</sup>

Later city land in relation to buildings was reduced until at



*Courtesy of City Housing Corporation.*

Fig. 2. A plan for a small apartment.

<sup>3</sup> See Della Thompson Lutes, *The Country Kitchen* (Boston, Little, Brown and Co., 1936), for one detailed picture of rural life.

the present time we have apartments and houses with a minimum of ground, and this used for beautifying the premises rather than for furnishing a direct supply of food. Not only would the individual who tried to keep cows or pigs in a city be frowned upon; he would be prohibited from carrying on work that created unsanitary living under congested city conditions.

**Small apartment.** Figure 2 shows an apartment suite designed for one or two persons who are probably employed during the day. The kitchenette which is counted as half a room indicates that a minimum of attention is expected for the preparation of meals. Obviously little food is stored. Little if any entertaining is done in this apartment. A table must be used in the living-room. The dumb-waiter, indicated by the x, eliminates need for a back door and porch. Rugs and furniture must be cleaned with a vacuum cleaner, and clothing sent to dry cleaners and laundry.

In many large apartment buildings it is possible to live without stepping on ground. Some buildings have stores, commercial dining-rooms, recreation rooms, nursery schools, kindergartens, and other services that make them a self-sufficient unit as long as there is money to bring in supplies. One could not, if one chose, supply one's own food directly. With money to bring in supplies living can be very comfortable and interesting. But it is entirely different from living on a farm or in a village of garden homes. For one thing the person who grows up in an apartment never learns to garden or raise farm animals. Without learning to garden, even his labor plus seed is of small value in producing a food supply.<sup>4</sup>

Distinct as the rural and urban situations are, many persons fail to recognize the influence upon living exerted by the form of shelter used. Whereas the rural trained person makes his adjustments by producing his food supply, the city-trained person sells his services for money with which to bring food to his city apartment or house. Adjusting to either the countr

<sup>4</sup> See also floor plans in the *Life* magazine for September 26, 1938, pp. 44-64.

or city means learning how to live as others live, either on the land or isolated from it.<sup>5</sup>

When movement was largely away from farms or rural com-



U. S. Resettlement Administration, Photographed by Rothstein.

Fig. 3. One of the Cumberland Homesteads built to aid three groups of people: timber workers, miners, and farmers in the poor land area. It is located in an agricultural community planned for 274 families who will derive their income from the cultivation of individual tracts of some twenty-five acres each, and from the development of coöperative enterprises. The houses are one and one-and-a-half stories high and contain four to even rooms. Additional buildings consist of a poultry house, a garage and tool storage house, a stable and barn. Health facilities are to be provided in part by an infirmary.

munities, the problems of adjustment were in terms of learning how to live without gardens, vegetable cellars, dairy rooms, attics, and so on.<sup>6</sup> When shifts of industry threw workers out

<sup>5</sup> Haven Emerson and Earl B. Phelps, "The City Gains on the Country," *Survey Graphic*, Vol. 15, No. 5 (August, 1939), p. 469.

<sup>6</sup> E. L. Kirkpatrick, "Housing Aspects of Resettlement," *The Annals of American Academy of Political and Social Science*, p. 94.

Frederic Van De Water, *A Home in the Country* (New York, Reynal and Hitchcock, 1937).

of employment, one solution was for people who knew gardening to return to farms or small towns. Communities known for subsistence homesteads, that is, one to twenty- or thirty-acre places were developed.

**Influence of climate.** The influence of climate upon manner of building and using houses is pronounced and has many ramifications. The number and kind of out-of-door living areas is most noticeable. Generous porches, patios, walled gardens for eating and entertaining illustrate (Fig. 1, Chapter 9; Fig. 12, Chapter 2).

Manner of construction of the warm- and cold-climate house is also different. There may be no basement in warm climates, thinner walls, more windows, and fewer provisions for heating. Where the climate is not tropical, the lack of central heating may mean severe discomfort through rainy seasons and the chilly portions of the year. Many of the better built warm-climate houses are generously provided with porches and windows, but the walls are well sealed and heating is done with electricity. Some cities have municipal heating plants and individual homes are serviced with heat as with water, electricity, or sewers. Central heating eliminates coal soot, ash, and other forms of heating dirt and reduces very much the amount of sweeping, dusting, and washing of windows, wood-work, and floors. Also the walls may need but infrequent changes of wall paper or other decoration.

In cold climates the construction will be the reverse with emphasis upon substantial basements, well-insulated walls, storm windows, and efficient heating plants. The change of the seasons will necessitate the getting out and putting away of porch and garden furniture; exchanging screens for storm windows; providing generous hall closets for winter wraps skates, or skiis; storing fur coats, wool blankets, down comforters, and so forth. Mere change of temperature forces many activities into the house thus affecting modes of living as well as type of construction.

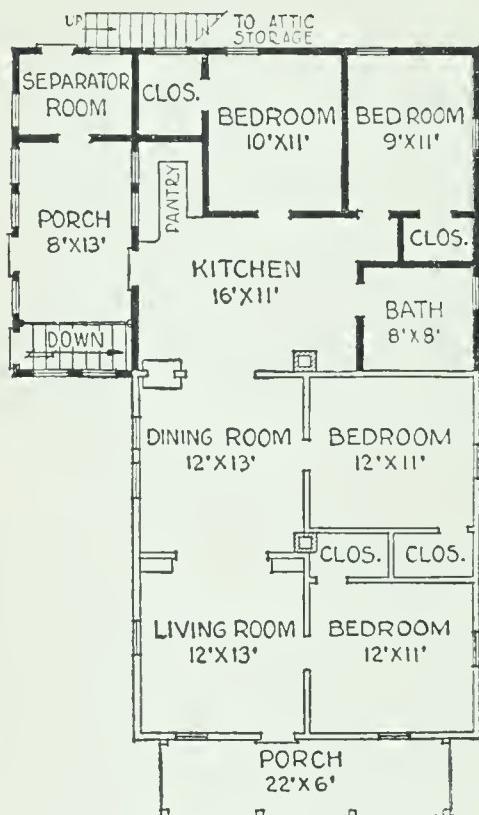
In the very warm climate a simple routine of daily and weekly work may be sufficient the year around with compara-

tively few occasions for redecorating or general house-cleaning, whereas in the cold climate there is sure to be need for not less than a spring and fall cleaning as well as other adjustments to seasonal changes. Getting ready to make the proper adjustment is not only a household problem but one stimulating much industrial and business activity. The tempo of cold-climate living must be faster to keep up with the weather.

In Chapter 6, "Management within the House," you will find weekly schedules for high-school girls, two living in Puerto Rico, two others in Minnesota. In them you can see the influence of climate as well as occupation and tradition.

**Patterns of living as influenced by occupation.** Certain occupations for family income are still so intimately a part of the house that the family pattern of living is inseparably bound up with the occupation. Farming is perhaps the most noteworthy example of this intimate relationship between income and family life activities. By contrast with urban homes, it shows clearly.

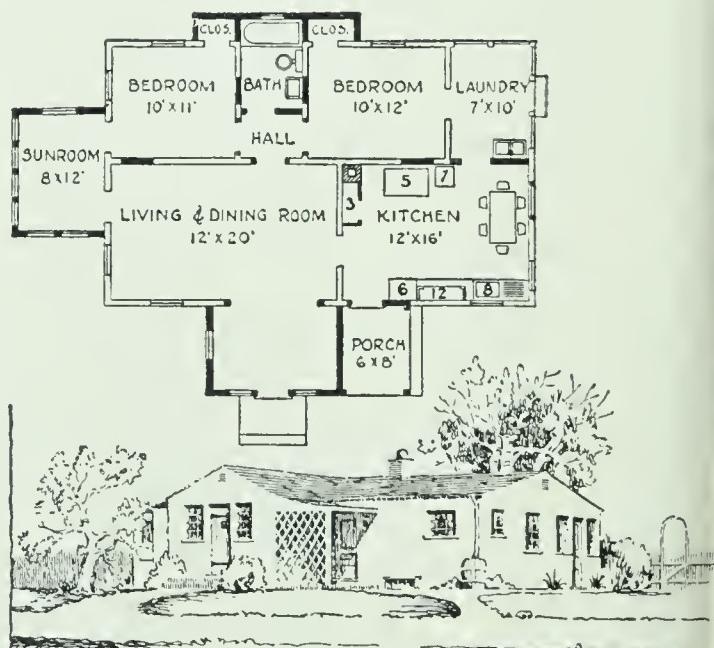
Farm meals are likely to differ from urban as to the hour served, menu, and manner of serving. The industrial or office worker who cannot go home at noon will have lunch at noon and dinner at night. The farmer reverses it to dinner at noon and supper at night. Where farm work is strenuous and the income meager, there may be a shack with little bedroom space and a kitchen for cooking, eating, and washing. Where farms are productive and the buildings well planned, there can be adequate bedroom space, a living-room, dining-room, porches, kitchen for the preparation of meals, and, if it is a dairy farm, adjoining milk room or house. Women's or children's labor on farms may be depended upon as regularly for income purposes as the wage of a woman who clerks in a city department store. On a fruit farm, sheds and driers in which women and children also work may be part of the building equipment. Separate rooms or buildings are a distinct advantage over the all too common situation where the income activities are brought into the house and made an integral part of family living, thus crowding living out of the house.



*Courtesy of U. S. Department of Agriculture.*

It is very evident that this plan is designed for a large household on a dairy farm. Room is planned for from four to eight persons. Obviously living is informal. With one bath poorly planned in relation to bedrooms, considerable inconvenience is indicated.

This plan also for a farm house shows a better relationship of bed rooms and bath. The large kitchen with table and chairs at one side show that the family eat here, but the long room in front marked living and dining room indicates that an extension table may be used here upon occasions when more than six are to be served. The laundry shows plainly that washings are done at home and the porches indicate adaptation for summer or warm climate use.



*Courtesy of U. S. Department of Agriculture.*

Fig. 4. Manner of living as seen through floor plans.

Stores, shops, doctors' and dentists' offices are frequently a part of the house. The local grocery, shoe, flower or other shop in which the "family has rooms at the rear" is likely also to be poorly adapted to health and comfort. When only a door separates the place of business and residence, all members of the family may be expected to act as clerks or helpers. Though such plans can be satisfactorily worked out, they too frequently mean the exploitation of family members and wretched living quarters.

In towns where it is customary for a physician or dentist to have his office and residence together, one will find that certain streets become known for such office and residence combinations. There may be separate entrance doors from the street to the office and the residence, or there may be one door to an entry from which to go either to the office or house. Though this close proximity of office and residence eliminates a transportation problem, it involves family members in answering the telephone and doorbell after office hours. Clergymen, politicians, tutors, and so on, are among the persons who also use their homes in a semi-public way.

This joining of occupation and residence is sometimes considered undesirable enough to cause prohibition in specially zoned areas or apartment buildings. Signs, display windows, and delivery traffic are regarded as essential to certain types of work but undesirable in a strictly residential area. Writing, commercial art, and other work carried on without display are overlooked in otherwise restricted areas if it does not cause too much traffic.

From the neighbor's point of view a combination of business and home-making activities is objectionable when billboard or window advertising is necessary. Businesses that are noisy, produce smoke and odor, involve the use of explosives, greatly increase traffic with added wear and tear on streets, or the common entrances and halls of apartment buildings, are regarded as undesirable. From the individual family point of view the business may endanger safety or health and encroach upon the needs of living. There may be too little time for

meals, improper sleeping quarters, poor sanitary conditions, and little children may be forced to live in the office, shop, or store.

**Influence of income.** The relation of income to the cost of shelter determines in large measure what persons and family groups can have. If half the income is needed for food and half for housing, nothing is left for clothing, medical care, recreation, and so on. Many families earn less than enough for adequate food; thus shelter is something for which they can make no plans. The places that come to be inhabited under these circumstances are unfit for decent living. Dark damp basements, six- and seven-story walk-up tenements, box cars, huts, tents, inadequate trailers, and sod houses are poorly used for permanent living. Overcrowding is commonly associated with low income, and overcrowding usually means that the able-bodied members of the family will avoid irritations by spending as much time away from home as possible.

The more time devoted to work the less time is available for living at home and hence the tendency to reduce the rooms of the home to the fewest possible number. This has been widely practised by individual families, and recently building projects have been planned for a minimum use of house space. The bedroom is the last that can be eliminated and thus must have first consideration in planning for shelter. The dining room can be omitted and often is, in even costly small housing. One can go out to eat, or use a drop-leaf table in a living room. Eating together is one of the social activities of a family group; yet it is well known that families with generous incomes as well as those with meager often eat few meals together. Dinners may never be used as social occasions for entertaining guests.

Some families feel they cannot afford the cost of maintaining an extra bedroom for guests. Some figure that they cannot afford to send laundry out to be done, whereas others feel that they cannot afford laundry space and equipment either to do it or have it done at home, since members of the family who would be needed to do the laundry could be employed.

more profitably away from home and to hire a worker would cost more than having it done commercially. Refer to page 233 for a list of activities common to homes in general if you wish to understand the extent to which individual families can vary.

If you have grown up in a city, it will be hard to picture a day of butchering hogs on a farm, and if you have grown upon a farm, it will be hard to sense how dependent a city family, housed in a small apartment, is upon a regular money income because nothing can be raised and comparatively little stored in the home. Plans for the dwelling and plans of managing in the home must differ because of the influence of location and income.

A large income in relation to the cost of housing does not necessarily mean a larger house but often greater expenditures for entertaining, and more attention to leisure-time activities. There is freedom to indulge in house repairs, or new equipment not absolutely essential, and there is a sense of economic security. This sense of security makes planning possible and removes worries about moving or being evicted.

**Living as influenced by age.** From a physical point of view the adjustment of furniture is a definite problem. To avoid putting little children to great discomfort small-sized beds, chairs, and tables are needed. Low, substantially built stools, on which they can easily step, raise them high enough to wash in the family lavatory, get a drink at the kitchen sink, or lift objects from shelves otherwise too high. Light-weight metal seats with short legs tipped with rubber vacuum cups can be easily carried by little children to use as a chair on the floor or set on a dining-room chair to raise them to a comfortable height for eating at the table. Because muscular coördination is still poor, children's furniture should be substantially built but light in weight. Low hooks make it possible for them to learn to hang their garments; pictures placed low bring objects of interest to them; and toy-sized brooms, dishes, and other miniature household objects give them understandings about the purpose and use of larger equipment. For little chil-

dren the learning as the result of experience is still very limited. This means that adults and older brothers or sisters have the problem of trying to think themselves back at the child age to understand childish difficulties and realize that careful arrangement of furnishings as well as patient demonstration and explanation along with encouragement for practice may be needed to teach children. The problem is a double one of adjusting material things and making life less difficult through clear and patient teaching.



Fig. 5. There is wide range in age, physical capacities, and social interests among family members that call for adjustments of building and furnishings.

Some persons are young at seventy-five; others old at twelve or fourteen; that is, some persons keep up their activities and interests whereas others of comparatively few years are fixed in their ways and limited in their interests. A grand parent may be the life and stabilizing influence of a family or conversely the one whom every one secretly dreads to see coming. Household problems of adjustment to age difference depend upon habits, interests, and attitudes as well as upon

physical development. Decrepit members of a family require much the same type of care as that given convalescent or invalid members. Whether pleasant or disagreeable, they are physically incapable of much activity and must be helped without being made to feel uncomfortable about it.

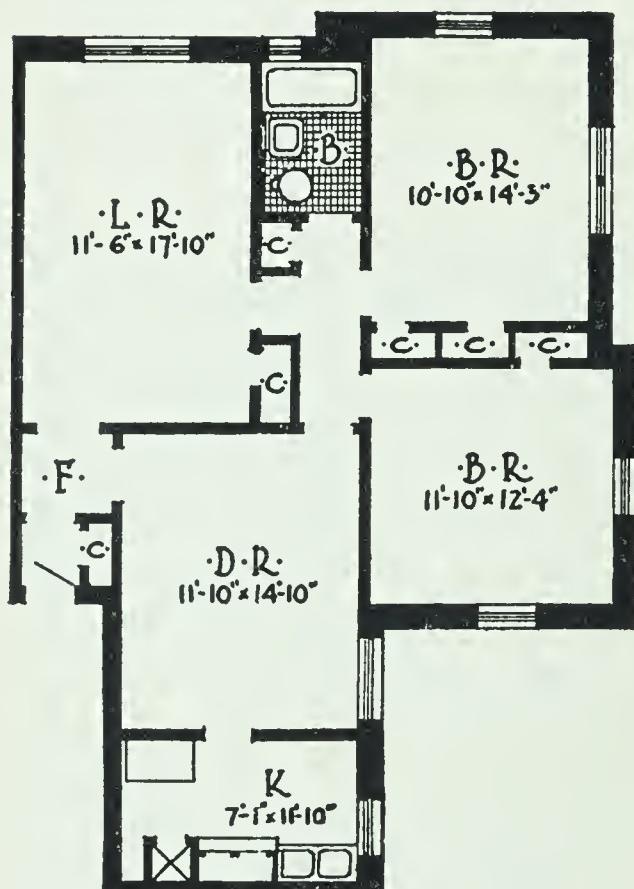
Though presumably persons who have lived longest have had the most opportunity for valuable learning experiences, it not infrequently happens that there has been little interest in learning how to live with others except in the rôle of one who dictates. Learning to plan the house for the health and use of all members is sometimes new to the old as well as the young.

**Size of families.** If houses might be built to fit families according to their size, we should need houses largely for two-, three-, and four-member families according to the 1930 census. Only to a very limited extent, however, are houses built to fit families. The small family may have the big house and the large family the small one, for the larger the family the more of the income that must go for food and hence the less will be left for clothing, housing, and other needs.

<i>Families</i>	<i>Number of persons</i>
2,357,463.....	1
6,982,835.....	2
6,226,519.....	3
5,234,696.....	4
3,574,362.....	5
2,273,300.....	6
1,392,356.....	7
842,669.....	8
493,174.....	9
272,068.....	10
138,816.....	11
115,405.....	12 or more

Between the 1920 and 1930 census there was a 1.1 per cent loss in the number of children under five years of age.

Manner of living as seen through floor plans. This plan furnishes a fine illustration of a room arrangement that provides for different types of living. Two persons, who keep a guest bedroom for entertaining as many as two overnight guests, and occasionally as many as four dinner guests might



*Courtesy of City Housing Corporation.*

Fig. 6. Good arrangement shown in floor plans.

vided in the apartment and would obviously represent a case of overcrowding.

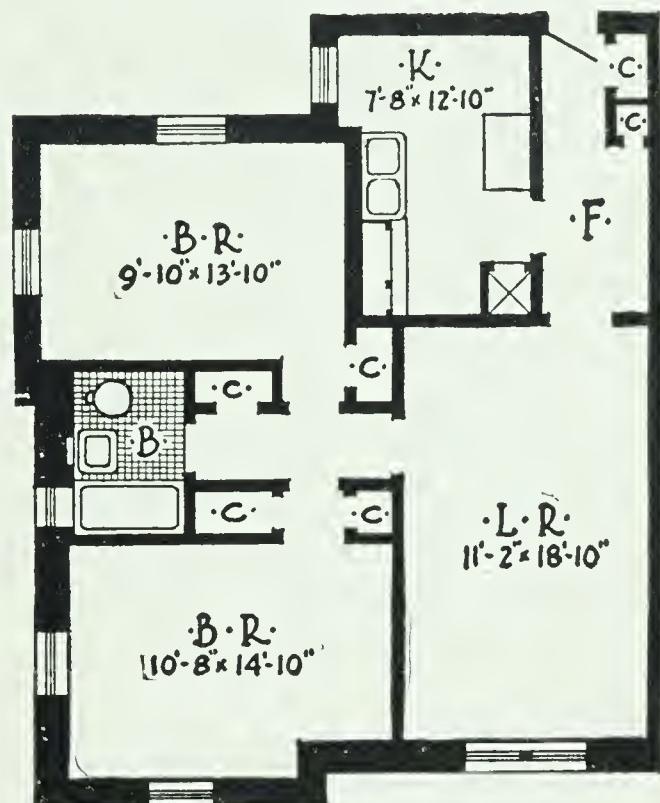
Figure 7 is another apartment of the same building with enough room for two persons. Again the plan indicates a minimum of emphasis upon housekeeping activities. With the kitchen space arranged as shown, a small dining table might be used in the broad end of the kitchen. With no door directly from the living-room the plan does not presuppose that meals will be served in the living-room. In this apartment as in the other, the dumb waiter, indicated by the x, eliminates a back door and a porch.

use this space comfortably. A family of four could do no overnight entertaining except as they converted the living-room into a bedroom. Being planned as shown, families of reduced income and in need of utilizing every room to the utmost would probably convert the living-room permanently into a combination dining and living room. This could mean six persons in four rooms of moderate size and a small kitchen. While a better plan than some for such close living it would be an undesirable use of the space provided.

**Multiple-unit housing.** If the bungalow, single house, or apartment is accepted as the single unit of housing, we find that multiple-unit housing is created in a variety of ways. There is the double house—two houses joined by a central wall, the duplex or two-apartment dwelling, and many variations of houses and apartments within a single building or on one plot of ground. The tendency of multiple-unit housing is to destroy privacy and access to ground and garden, but to increase services and the common use of equipment that it is possible to share. Per unit it is less costly to supply heat, light, water, plumbing, janitorial and other services, hence by living under conditions of multiple housing more people can

have more of the commonly shared conveniences and services. However, too much of our multiple-unit housing has been built on minimum land space. This interferes with gardens, recreation spaces, sunshine, and esthetic qualities of architectural design. Some of the worst examples create a type of beehive existence for those who must live in them. But multiple housing can be more spacious, economical, and pleasant by allowing more land per apartment building, and utilizing modern methods of designing to create privacy, comfort, convenience, and beauty. See Figures 8 and 9, page 358.

**Standards.** We have standards of various kinds. Weights and measures are familiar examples. Nutty flavor, fine, even grain, golden brown crust, and rounded-top oblong loaf may



*Courtesy of City Housing Corporation.*

Fig. 7. An alternative plan in the same building.

be the general classification of carefully described standards for bread. The calorie is a standard of measure for heat and energy units of food; a yard is a standard measure for textiles. A 100-watt electric light bulb gives a standard quantity of light, and so the list runs. These standards are concrete.

There are also standards or patterns for living. *Substandard* is a term applied to housing to indicate a poor or unsatisfactory level of living because of poor housing. It is often used in a loose and inaccurate way though attempts have been made to describe substandard in concrete terms. The description on page 75 is one such attempt.

Standards in housing are not complete, but some beginnings have been made. In the main they aim to improve safety, health, comfort, and general manner of living. For example, an average of not less than a room per person can be shown to be valuable from a health as well as comfort point of view. No windowless rooms is likewise a matter of health and pleasantness. Building and zoning laws in general tend to set standards.

In thinking out standards one should distinguish between comfort and luxury. Frequently one exists without the other. Among the innumerable examples of a separation between comfort and luxury none is more striking than that of the palace of Versailles, resplendent in its crystal, gold, and tapes-tries, but too cold in winter to be inhabited, though a heating system existed for the preservation of plants. Money was poured into luxury with comparatively little thought for com-fort.

There are standards held by individual families that vary from those described by laws or ordinances. They are the standards families set for themselves and often are higher than those set by law. In choosing a new building a family may insist upon modern plumbing in good working order, electric lights, a minimum temperature of 70° F. during the day and until their retiring hour. Their standard calls for quick repair in building damages, cleanliness of halls, and reasonableness of service. If moving, they will look until the

find the location that most nearly meets their standard though this may not be a legal standard. It is likely to be well above an enforceable standard from a public point of view.

**Ideals.** One's ideals may be above those it is possible to experience in housing. If ideals are thought through in terms of health and comfort, they are a valuable means of improving living conditions. A serious difficulty comes when persons create ideals quite beyond any reasonable expectation of realization and have no patience in working toward them. Healthful, comfortable, and pleasant living for every citizen of the United States, is a fine ideal though it may take several generations for it to be realized. However, impossible as it seems for the present, it is an ideal worth holding.

**The building as an aid to family living.** We have been talking about different influences that account for the way people live in houses. Out of the things people do can be constructed values that housing contributes to family living. Good housing contributes to sociability within the family when it furthers common interests by providing for group participation in work and financial responsibilities, and getting together for meals, games, reading, music, or other recreation. When large enough for entertaining, sociability is extended to more distantly related family members and friends. Good housing furthers *social security* when it helps in maintaining the respect—not the envy—of others. The standards of living in buildings, quite as much as the quality of construction, are important. Socially secure people feel that they belong to the family and community. They can trust others and in turn can be trusted.

**Respect.** Respect is of many kinds. In housing it is important for each person to respect the property rights of all others. Most persons have a few possessions they prize. Respect or willingness to help others keep their possessions in good condition usually aids good feeling and friendship. Neighbors who keep up their own property and help in the community are respected for good citizenship. Tenants who help to keep property in good condition and landlords who coöperate with

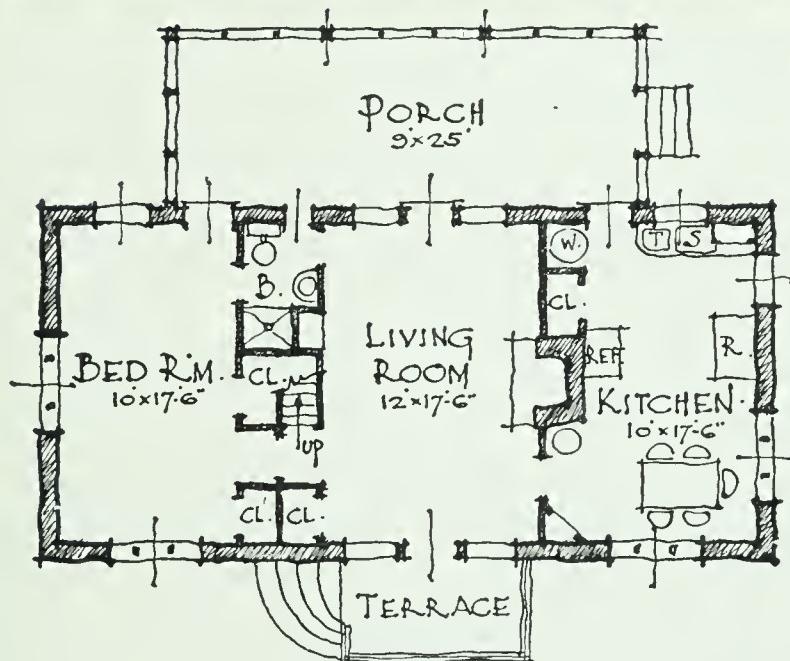
tenants in their efforts to maintain good standards of living show respect for the rights of each other.

Respect for individual rights within a family involves different types of ownership. Where little children are given their own beds, their own places for clothes and toys, it is possible to set an example of respect for their rights of possession. It is easy to understand the difficulties that some children have in learning the meaning of respect for the property rights of others when one knows that instead of having a bed of their own they have been put to sleep with one family adult after another and have seen the few toys they possessed tumbled about as of no worth. Some children never have even one toy of their own that is respected by others as a personal possession.

Letters, telegrams, telephone messages, and packages commonly represent individual rights and should be handled with the same respect one would give to another's money. Letters and packages are not opened unless directions for doing so are given on the envelope or wrapper. Since a telegram is urgent and somewhat public, it may be opened for the sake of getting the message on to the owner who is not at home to receive it. So too, telephone messages are semi-public. They should be recorded accurately and put where the owner will be sure to find them.

Certain parts of a house represent group ownership and call for a sense of respect for common rights by each member. A kind of disrespect for others is expressed when a person is careless about marring furniture, nicking dishes, water-spotting window ledges, carrying mud onto rugs, cleaning dirt from shoes by curling up in upholstered chairs or couches cluttering the living-room with scattered parts of the newspaper and so on.

An automobile in many families represents common rights of ownership and use. In the use of this family possession there is a quick transition to rights as a citizen or person of the community. The rights of use and accompanying responsibilities are defined by laws and ordinances which vary be-



*Courtesy of U. S. Resettlement Administration.*

**Fig. 8. Plan for a small house.**

This is a fine type of development of a crude historic plan in which the two rooms at each end of the house were joined with a roof over an open space used for work activities. Observe the convenience and pleasantness of this simple plan. There is closet space near the terrace door for wraps, and two closets in the bedroom. The bath can be reached through either the bedroom or living-room.

tween states and communities. So also the use to which buildings may be put is limited by city ordinances, the idea being to respect the rights of use for specific purposes.

**Assumption of responsibilities.** Maintaining a respected place in the home or the community implies intelligence and the assumption of responsibilities. Good homes provide opportunities for responsibility from which to learn. Children who are never taught by being entrusted with responsibility are likely to remain infantile in regard to responsibility. Work about a house is usually so plentiful that persons of all ages can participate. Such simple tasks as always shutting and locking outside doors, or turning off lights when not needed are definite responsibilities that young as well as old may share. Cleaning the bathroom on Saturdays or caring for the furnace in the morning and at night, keeping grocery slips, checking and paying house repair bills or making out and mailing the rent checks, keeping accounts and rendering reports, provide responsibility that persons of high-school age might well assume.

Without individual responsibility for the care of property we should all live in a frightfully dilapidated and chaotic lot of buildings. It is only by realizing how fast property deteriorates without care that one can appreciate the importance of constant attention. If minor repairs are made as soon as the first need appears, more serious damage is checked. As individuals in homes and as citizens at large every one has responsibility for the kind of housing occupied. Not only may we all enjoy living under better conditions by assuming a share of responsibility, but there is a sense of satisfaction in feeling that one has been constructive.

**Privacy.** Though man is sociable, he puts a premium upon privacy, especially in his home life. Constant association with people is tiring. Privacy is a means of rest. It gives a chance for retreat and recuperation. Though often unaware of the need, children as well as adults require the rest provided by privacy. Not only is privacy a rest but it is also a means of isolation and protection from communicable diseases. In every

house there should be a sufficient number of rooms, and they should be so arranged that privacy is possible for every one during part of his waking hours.

It has been suggested that privacy is one of the most costly values in housing. The tendency to seek individual houses, apartments, and rooms is evidence of the demand for it. Where no better means are available, curtains may be resorted to for screening. Walls obviously serve the important purpose of giving privacy. How they are built determines the kind and degree of privacy that may be enjoyed. A double glass wall with space between, as may be seen in radio studios, gives sound but not sight privacy. Walls, floors, and ceilings of sound-proof construction give both sight and sound privacy. Air-conditioning is also a means to privacy, for doors and windows can be kept closed, thus excluding the neighbors' conversation or radio program, the grinding of street railway wheels, fire sirens, and so forth. Separate entrances in apartment buildings, screened or partitioned porches, walled gardens, private swimming pools, tennis courts and golf grounds, private driveways, and spacious lots for the site of the house are other means of securing privacy.

**Freedom.** Freedom to pursue one's individual interests is regarded as important. Freedom from the restraints of school or business may prompt persons at home to indulge in domination, curiousness, gossiping, and so on, usually annoying to others. The extent to which one may go in pursuing freedom of this kind will be a matter of how much one's individual interests interfere with other persons and their limit of toleration. Privacy is therefore closely related to freedom. If individual families can indulge in housing where they are free to follow particular interests they are fortunate, especially when different age needs and interests can be recognized. A nursery, a playroom, a music room, a sewing-room, a shop, a study, a suite for a grandparent give individual freedom and reduce the number of those contacts that cause one person to "get on the nerves of another."

**Mobility.** More and more families find it necessary to be able to move, often on short notice. A change of occupation or a change of industry may create a need for living in a different town or a distant part of the same city. Families whose income is from occupations calling for quick changes find that furnished apartments or apartment hotels increase their freedom. The services added to apartments in the form of refrigerators, stoves, and built-in furniture simplify the problem of moving. Occasionally about half the furnishings are so supplied in the form of permanent equipment and furniture. Rugs, chairs, bedding, table linens, books, and so on, represent the movable articles that the tenant brings.

**Control.** When a baby has learned to walk but still has poor muscular coördination and no understanding of the value of things about the house, one puts breakable objects out of reach and sight. It is the simplest procedure for control. The management of persons and relations in a house is subject to this type of control with growing children and adults as well as babies. For example, soft rugs, stair carpets, linoleum, rubber heels, soft-soled bedroom slippers, tips on the bottoms of chair legs that are pushed about over bare floors are all means of deadening noise. Noise is an irritation; hence the devices for reducing noise without constantly reminding persons to be quiet facilitate better relationships among them. Growing boys are notoriously noisy in banging doors and shouting. Some doors can be hung to swing quietly both ways. Rubber pads and bumpers can be used as sound deadeners on others. Oiling hinges removes squeaks, and planing warped doors that stick removes need for banging. Few homes can use the sound deadening porous walls now common in large dining-rooms, but where noise needs to be reduced, the entire floor may be carpeted and heavy draperies used at doors and windows. Like rugs, porous walls, heavy draperies, and entirely upholstered furniture reduce noise. Hard, glazed materials such as dishes, metals, porcelain sinks, tile, brick, and wood floors are noisy. Hard rubber materials are more quiet.

Electric clocks, automatic furnace controls, electric bells and

lights on electric ovens, photostatic light controls for opening gates and garage doors are further illustrations of mechanical devices used to remove minor responsibilities from individuals.

Placing waste-paper baskets conveniently near desks, dressers, bathroom lavatory, kitchen sink and so on, aids in keeping neatness without annoyance to individuals.

Thinking through the needs of the group and planning for convenient and comfortable use removes many of the innumerable petty irritations of a household and thus facilitates better relationships among persons. From a practical point of view that remedy for any household lies in first listing all the irritations that individuals of the family suffer and then checking them to see how many can be removed by possible building or furnishing changes and how many must be solved by greater thoughtfulness on the part of individuals. Irritations from the neighborhood or community call for group action beyond the immediate family or moving when it is the most practical remedy.

**Economic security.** To feel secure economically one should know that it is possible to pay the rent regularly or meet the obligations of mortgage interest, taxes, upkeep of the building, and other costs of ownership. The home owner may fear a mortgage foreclosure; the renter may know that he will be asked to move if the building is sold. Properly made and registered deeds and leases, signed by both the landlord and tenant, are means of establishing an element of security for the occupancy of a building. The reliability of owner and agent as well as tenant may be important to a sense of economic security in housing.

**Community as a disintegrating force.** Usually one chooses to think of one's home neighborhood as contributing to the unity and good life of homes in it. Good communities are constructive, but unfortunately many communities have poor homes and attractive loafing places. Often they are not bad in the sense that would make it legal to close them but valueless and only a place to put in time. Without giving something worth while to individuals they prevent family members

from spending enough time at home to know and enjoy each other.

Housing is linked with delinquency also. By living in a dilapidated building in a community of saloons, brothels, businesses or industries with no areas for constructive play or work a child can easily be drawn into gambling games, and plots against property and human life. The building is not an active agent in leading newcomers into the gangs, but, being in the area of unsocial activities, new inhabitants are forced to associate with those already established. Association is an easy means of learning, and unsocial conduct is learned as easily as social. Unless newcomers are outstandingly strong characters, they learn and accept the ways of the neighborhood.

It was once thought that truants, delinquents, and criminals always belonged to certain national or racial groups, but Dr. Clifford Shaw has shown by making maps and plotting the addresses of 60,000 Chicago truants, delinquents, and criminals over a period of thirty years that the Loop and other areas of bad housing were always the centers of bad conduct whether one national group or another occupied them. National groups moving to better areas improved in conduct. Studies in other cities since have shown a definite relationship between bad housing and unsocial conduct.

Rural areas of extreme isolation, such as mountain communities, house boats, swamp areas, prairie hamlets, and the like, may also be places in which regard for human life or welfare is of little concern.

**Cultural assets of the community.** Few families have resources enough within the group to provide a social life from which to develop citizens capable of living with other people. Common interests bring people together and provide an avenue for social learning. Endless types of human interests are represented in communities over the United States. The public library and its extension service that has come to be common even to rural communities provides a means of learning vicariously as well as employing leisure time. Museums that

are common to the larger cities supplement books. Implements, house models, jewels, art treasures of ancient or distant peoples are realities in museums. Baseball, tennis, ice carnivals, ski tournaments, community sings, travelogues, and dramatic performances, illustrate the long list of community activities with deep human interest that can be conducted in ways conducive to furthering human understanding and promoting a sense of good fellowship. Unfamiliar games of foreign countries well played give insight into the life of other people as well as respect for the skill of the players. Musical, dramatic, and art clubs are frequently so conducted as to broaden the thinking of the members and promote personal development beyond that possible within the home.

#### SUGGESTIONS FOR STUDY

1. Analyze your present housing, listing the type and number of social values it contributes to you and those with whom you live. Describe the kinds of responsibility you assume for your own housing. Enumerate the social values offered by the community in which you live.
2. Discuss the following expressions as evidence of attitudes toward housing. Which are constructive, which destructive?

#### *Attitudes*

- a. "No matter how often she moved she always settled herself by putting up pictures, adding her own lamps, radio, books, and drawing boards. In no time she would clean a room and put it in order for living."
- b. Mrs. X and her daughter can be recommended as highly desirable tenants. They keep and leave a place in good order because they enjoy having an attractive and livable home.
- c. "I didn't grow up with modern conveniences and I didn't have no schooling and I guess my children aren't any better than am."
- d. "I remember how we struggled to get money enough to owe to the United States when the two oldest children were still babies. Because we were peasants we worked very hard and had miserable living conditions. Though we had had almost no school-

ing, we were determined that our children should not be forced to grow up as we. Letters from relatives who had moved to the United States described better homes and public schools that our children could attend, so we determined to move."

e. "We moved into the house when I was in grade school, and from that time until now the attitude was always one of staying until we could sell and build a new house. For years our house needed reshingling but the family always hesitated to spend the money because of the possibility of moving."

f. The landlord refuses to do anything toward the repair of the building for he is interested in it only as a source of income. He does not care whether it is a fit place for living but rather how much rent he can collect.

g. The owner lives in the building and takes pride in helping his tenants though he does not get high rents and has no income except that of the building. For tenants who can and will do their own redecorating he supplies materials and keeps their rent low accordingly. Some tenants have lived in the same apartment since the building was opened twenty years ago.

h. "As long as I continue to permit people to live in the house and accept rent I have an obligation to keep the property in repair and give service."

### *Study visits*

3. Visit houses or apartments for sale or rent and determine
  - a. How many persons could live comfortably in each?
  - b. What ages are provided for?
  - c. What work activities is the family expected to perform?
  - d. What type and amount of garden space is included?
  - e. How many closets? How large? How equipped? For what type of wardrobes do they provide?
  - f. What, if any, recreational interests are recognized?
  - g. To what extent is privacy possible?
  - h. What standards of property care are common to the building and neighborhood?

### REFERENCES

- ALDIS, Dorothy, *Their Own Apartment* (New York, G. P. Putnam & Sons, 1935).
- ALDRICH, Bess Streeter, *A Lantern in Her Hand* (New York, D. Appleton-Century Co., 1928).

- , *Mother Mason* (New York, D. Appleton-Century Co., 1924).  
ALLEE, M. H., *House of Her Own* (Boston, Houghton Mifflin Co., 1934).  
DAY, Clarence, *Life with Mother* (New York, Alfred A. Knopf, 1937).  
FERBER, Edna, *Old Man Minick* (New York, Doubleday, Page and Co. 1924).  
FOX, Genevieve May, *Mountain Girl* (Boston, Little, Brown and Co., 1934).  
GRAYSON, David, *Adventures in Contentment* (New York, Doubleday, Page and Co., 1928).  
GREBENC, Lucile, *Under Green Apple Boughs* (New York, Doubleday, Doran and Co., 1936).  
LAWRENCE, Josephine, *Bow Down to Wood and Stone* (Boston, Little, Brown and Co., 1938).  
—, *The Years Are So Long* (New York, Frederick A. Stokes Co., 1934).  
LUTES, Della Thompson, *The Country Kitchen* (Boston, Little, Brown and Co., 1936).  
NORRIS, Kathleen, *Mother* (New York, The Macmillan Co., 1911).  
POOLE, Ernest, *His Family* (New York, Grosset and Dunlap, 1938).  
TOMPKINS, Juliet Wilbor, *Johanna Builds a Nest* (Indianapolis, Bobbs-Merrill Co., 1920).  
VAN DE WATER, Frederic, *A Home in the Country* (New York, Reynal and Hitchcock, 1937).

## 5

## HOME FURNISHING

HOME furnishing is a means to both beauty and usefulness. What we term beauty comes largely as a result of our vision and the tastes we have cultivated in terms of what we see. Experience makes us feel good proportion as well as soft or harsh textures through the eyes. Though the appeal of furnishings comes through the eyes, we live with furnishings, handling objects, sitting on chairs, lying on beds, or eating from tables. Hence furnishings need to be functional as well as appealing. As long as they give pleasure and are useful, we wish them to last. Thus the household problem, unlike the store problem, includes a consideration of durability as well as original beauty and usefulness. It is important to be able to estimate about how long a given article may be expected to wear. Since furnishing is a means to pleasure through satisfying tastes, the family problem is one of group tastes. One can safely furnish one's own room according to individual likes, but a living- or dining-room should give pleasure to the group. Therefore group pleasure is involved when selections are made. (See portfolio section in connection with study of this chapter.)

As you read, consider:

1. Where have I been aware of seeing proportions that I enjoyed?
2. What is the essential difference between proportion as seen in a poster or picture and a room?
3. How does the problem of arranging furniture to balance in a room differ from creating balance in a poster?
4. What is the source of color? Under what conditions might a piece of white paper appear to be red?

5. What is the meaning of texture? What is the importance of texture to the furnishing of rooms?

6. What are centers of interest in rooms? What kind of variety can one find in them?

7. When may one have functional furnishings with little durability? What are the best examples I know of functional and durable furnishings?

8. How does the aim of a decorator who sets up a model room in a store or shop differ from that of a family that decides to refurnish and decorate its home?



**Furnishing for pleasure.** There is something alluring in the word-combination *home furnishings*. Instinctively one chooses to think of it as synonymous with interior decoration, beauty, and pleasantness. And so it may be.

Certain art principles underlie desirable effects. The same art principles emphasized in art classes for the making of posters, or wall designs have application to the furnishing and decoration of houses. Beauty is a problem of pleasing the eyes, and experience has shown that the effects called good are not just hit or miss. They are studied. They express taste. Even in the simple process of pulling window-shades one creates window spaces that are or are not pleasing according to the relationships or proportion of one space to another. Some proportions are more generally pleasing than others.

The relation of wall height to width may give a feeling of satisfaction or unpleasantness. It may seem much too high or too low for its width. Dark low ceilings are oppressive. A chair back much too high for the length of its legs and the size of its base gives one the uncomfortable feeling that it cannot stand except as fastened to a wall. An extremely low deep chair makes one feel that in sitting there will be a point where the strain on leg muscles may make one want to flop. Again the relation of base to height in well-designed dressers gives a sense of stability. One is not impelled to push them against a wall to prevent their toppling over. Thus windows, walls, rooms, furniture, and other objects in pleasing pro-

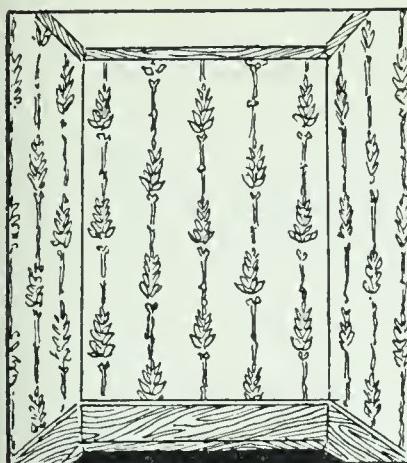
portions give satisfaction and have an element of beauty without decoration.

Though mathematically proportion is a question of the relationship of measurements, it is, from the point of view of furnishing and decoration, largely one of feelings and tastes and a question of appeals through the eyes. Some feelings may be more widely enjoyed than others. The proportions that produce these feelings come to be regarded as a part of good taste.

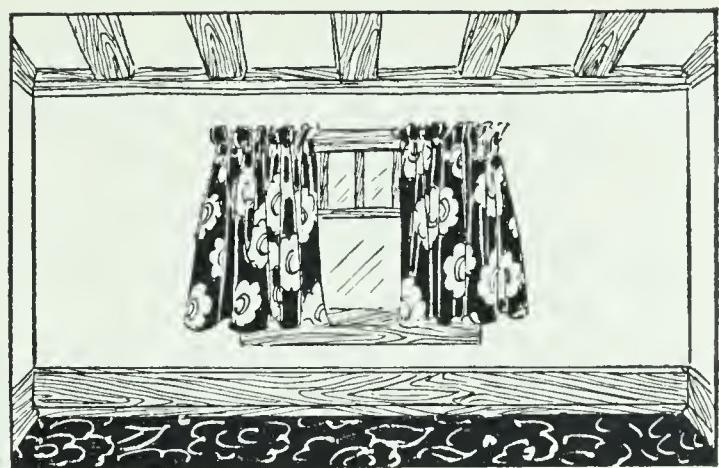
In designing a poster or wall hanging you will study proportion, balance, rhythm, or emphasis on a flat surface where the areas are not easily shifted. To alter them you must erase, paste a new piece of paper over the part to be changed, or start anew. Arranging a room is different to the extent that the objects may be moved about easily. It is possible to try one arrangement and another until the best is found. Often this is a process of weeks or months when people are living in rooms, for not only must the eye be pleased while you are standing at one point or another viewing the effects, but you must get the balancing and arranging that best fits the use to be made of the room and thus satisfy the tastes of the group as a whole. In fact, a final step in the real art of good room arrangement lies in studying the habits of those people who use the rooms as well as just good proportion or pleasing combinations of color. The most successfully furnished and arranged room is the one that is so carefully studied in relation to people that there is no urge on the part of its users to change it.

**Proportion.** Because it is easier to see the application of ar principles on two-dimensional flat surfaces and because wall are the backgrounds for rooms, let's work first with them Every wall has width and height. Sometimes the relationship is pleasing, sometimes it needs correcting with wall paper moldings, or panels.

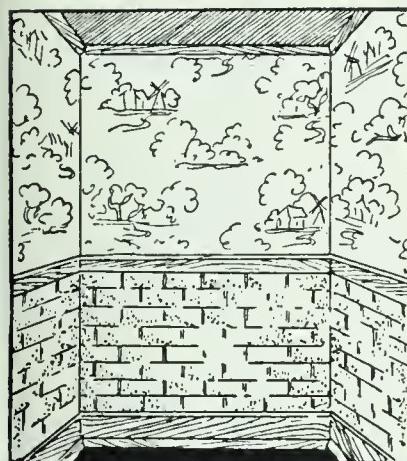
Proportion or the relation of one dimension to another applies throughout the house to walls, floors, ceilings, doors windows, chairs, book cases, tables, and other furnishings



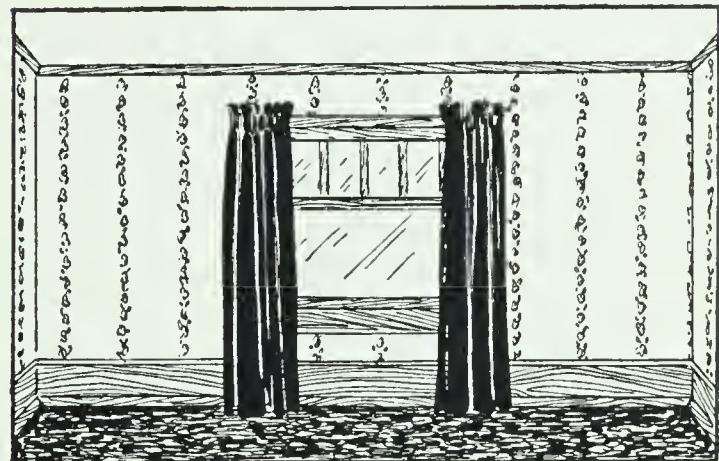
Tall, narrow effect emphasized through striped paper and light ceiling.



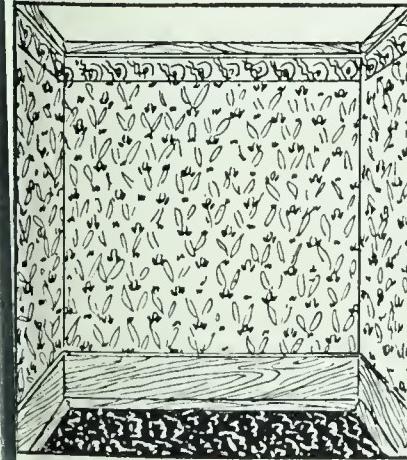
Broad effect emphasized by horizontal lines on baseboard window and curtains and beamed ceiling.



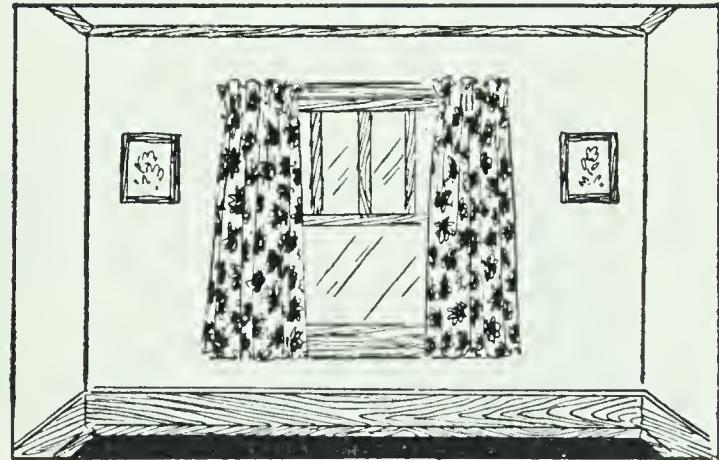
Height broken with dado and dark ceilings brought down sides of wall in a border.



Proportions improved through emphasis on perpendicular lines and light ceiling.

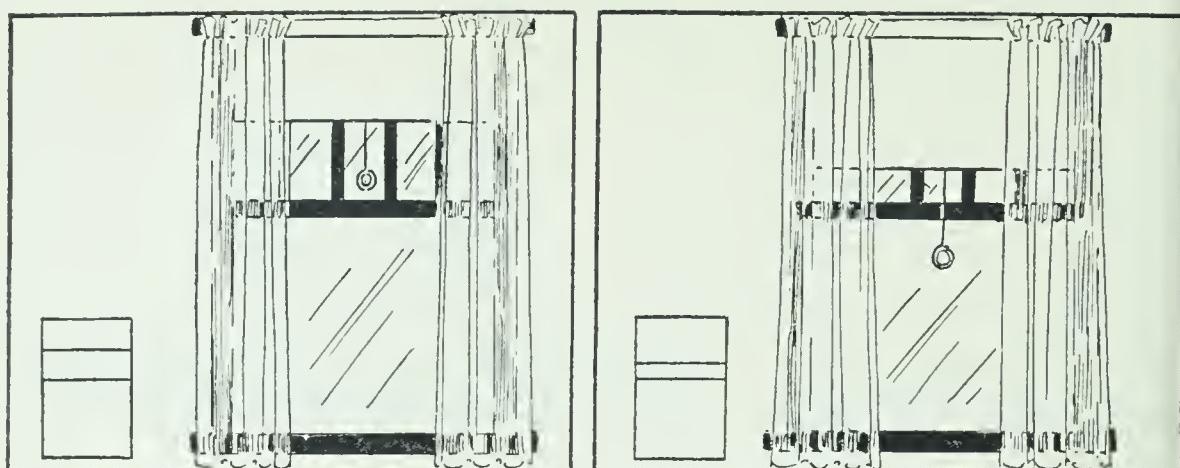


Room proportion better.

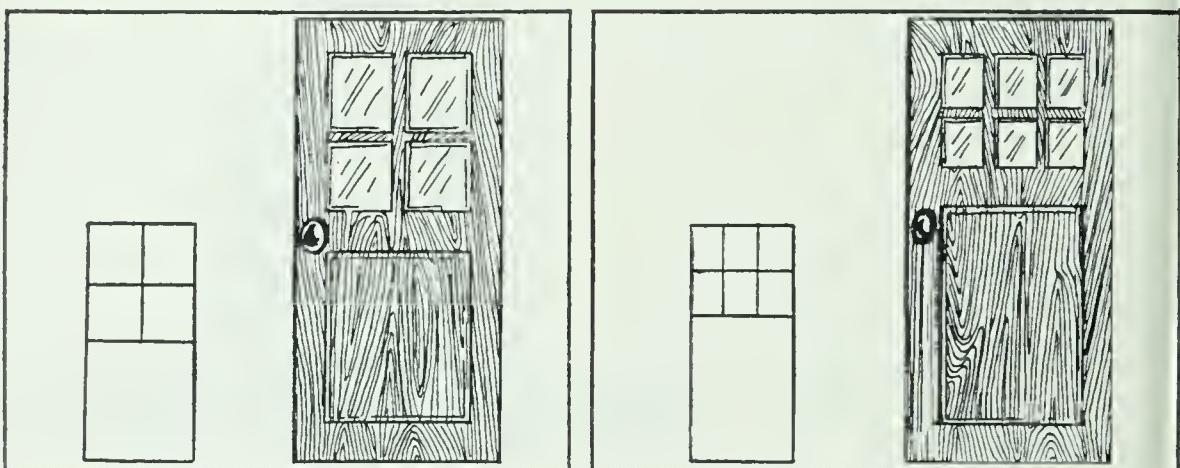


Room proportions better, hence less need for decorations that correct room proportions.

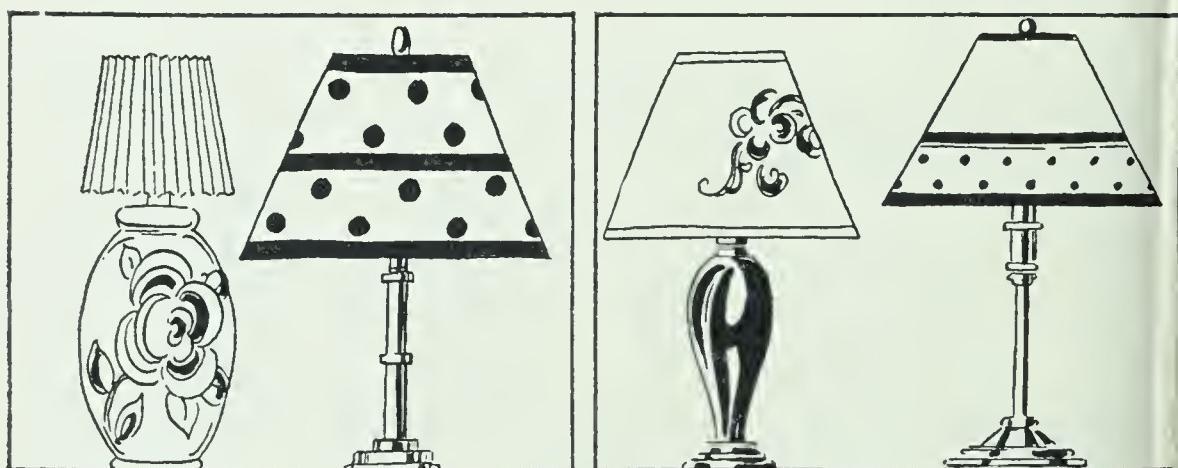
Fig. 1. Wall proportions.



Way shades are drawn affect window spacing.



Study key to left of drawings.



How is the bad spacing on the left relieved in the right-hand drawing?

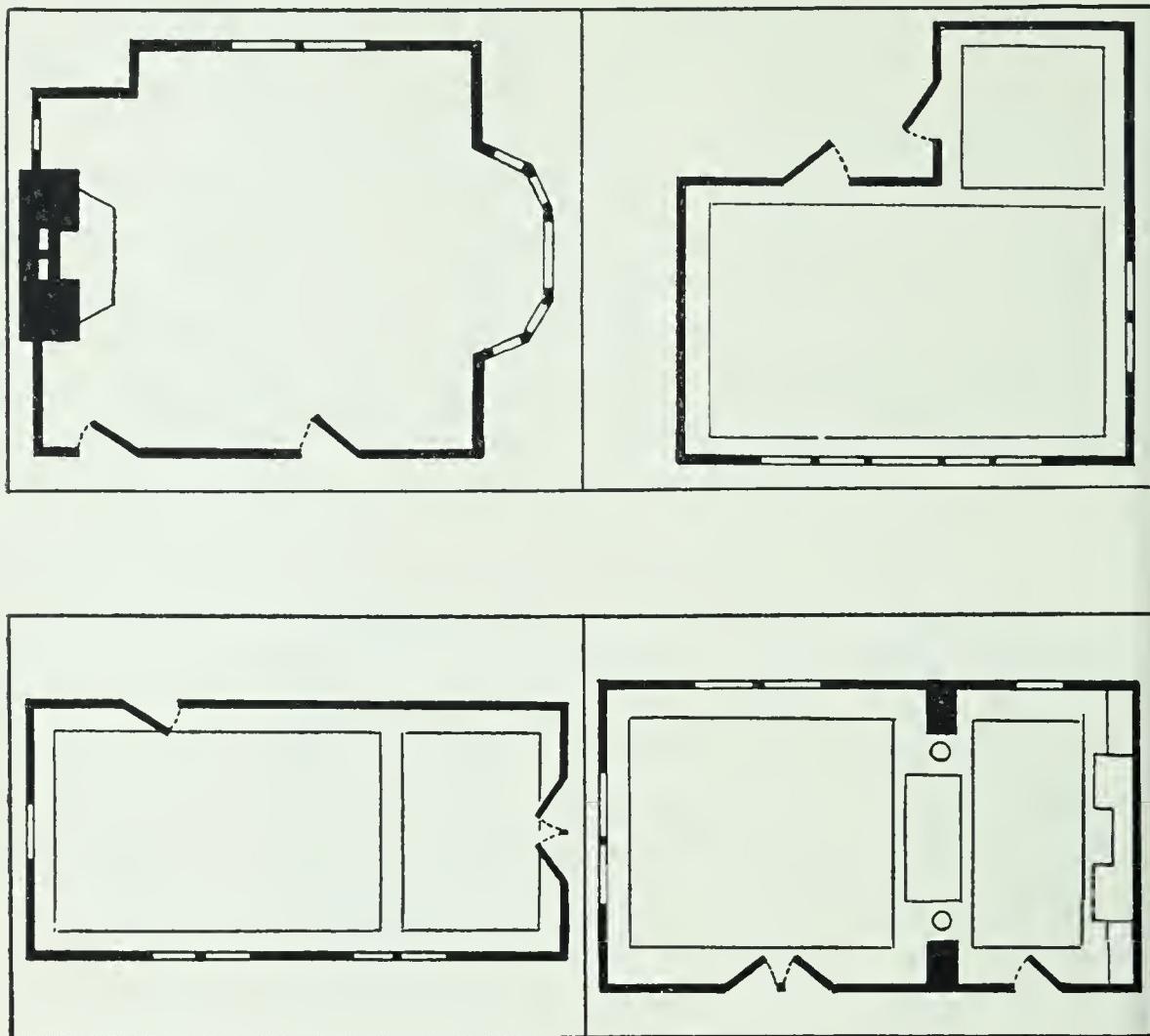
Fig. 2. A study in proportion.

To achieve good proportion you must obtain relationships that feel good through the eyes. They are neither top heavy, squatly, or uninterestingly square.

Walls, plus floors, plus ceilings determine the proportions of a room as a whole and add another consideration. Many rooms are badly proportioned, being too narrow for their length and height. Halls commonly create a problem for decoration of walls and placing of furniture because of such proportions. There are tricks in all trades, according to an old adage, and a trick for increasing the apparent width of a too narrow room is to hang a mirror, or use a picture in which the perspective is such that the eye follows a stream, street, or broad expanse into the distance. If the mirror can be hung opposite a window with a good view, a fireplace, large painting, or doorway leading to another room, much width can be added to the appearance of a narrow room. Scenery wall paper also can be used to good advantage for changing the apparent proportions of unsatisfactory rooms. Halls or dining-rooms are the most common room spaces that are likely to be narrow in relation to their length. Often a hall is no more than a passageway.

In well-proportioned rooms the wall decorations are lighter than the floor, and the ceiling lighter than the walls. Like the sky outdoors a light-colored ceiling leads the eyes upward and gives a feeling of height and freedom. Ceilings that are very high for the size of the floor can be made to seem lower by the simple device of using more color in their coverings and bringing them down the walls to a molding. Beamed ceilings are both dark in color and attractive; hence they give the effect of lowering the ceiling. Large elaborate rooms often have designed ceilings of carved plaster which though generally light command enough attention to make the room seem slightly lower.

A child's playroom furnishes an excellent illustration of how, by the use of pictures or wall designs at the level of the child's eyes and with plain, light-colored walls above, a feeling of spaciousness may be created for the child. By sitting, an

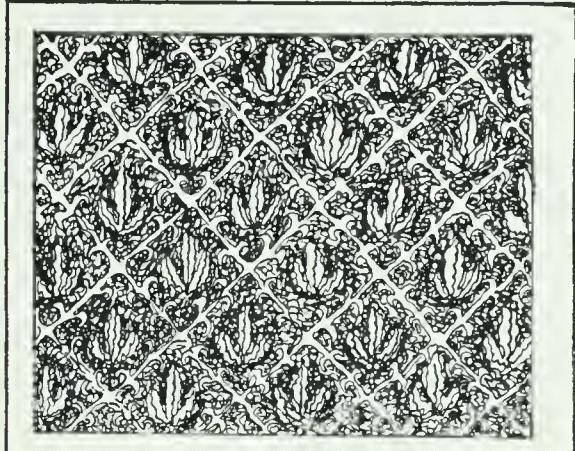
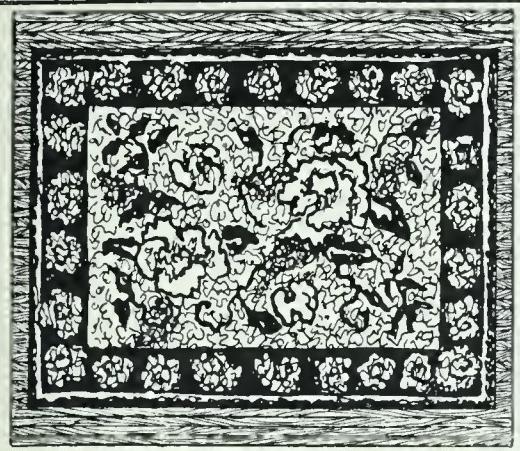


**Fig. 3A. Floor shapes create problems in selecting covers.**

The large room with fireplace and bay windows is carpeted. Rugs are used in the others. Note the problems created by the square entry, the extreme length of the next room in relation to the width, and those of the room with a den separated by pillars at one end.

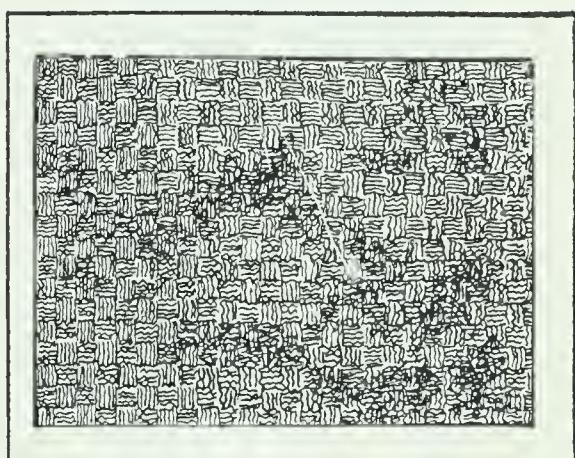
adult can bring him or herself to the eye level of the child and sense this effect.

**Balance.** Again it is easier to begin with a wall when applying the art principle of balance. As you recall there are two general types of balance, equal or symmetrical, and unequal sometimes known as asymmetrical or occult balance. Symmetrical is very common both to the exterior and interior of houses. If a line is drawn perpendicularly from the top to the bottom through the center of the front door of the house (Fig. 11A, p. 359), you will see that there are the same number and size of windows on each side. The door paneling also is th-



An unorganized floral design in bad proportion to size of rug. Floor border also bad.

All-over carpet design out of scale with floor area.



All-over design in rug. Rug size better for floor area.

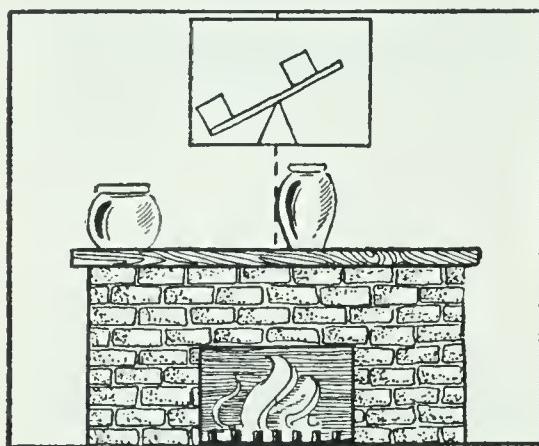
All-over carpet design also in better scale with floor area.

Fig. 3B. Proportion in rugs.

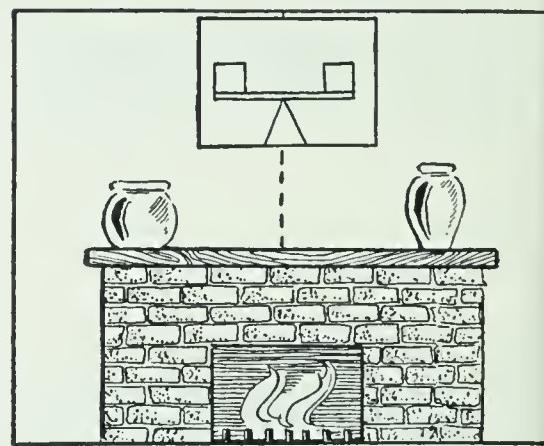
same on each side of the line. In fact, weighed by the eye's measurement one says that it is equal on each side of the perpendicular line. A line drawn through the fireplace of Figure 4 would likewise put the same weight on either side. A pair of chairs, one on the right, the other on the left of a door, furnish an example of symmetrical or formal balance. Dining-room chairs, when the same on all sides of a table, give till another illustration of this easily secured form of balance. See Figure 11.

The word *balance* implies rest or so equalizing weights that the pointer of scales no longer sways. With equally sized

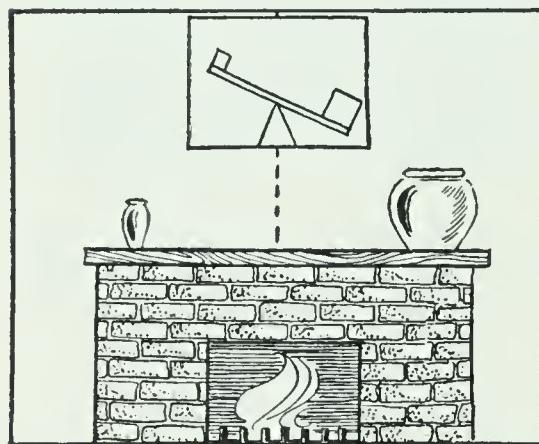
objects of the same kind, balance is simple and quick, but with feathers and lead, the amount of bulk differs greatly since the feathers are light and the lead heavy. A small bulk of lead balances a large one of feathers. Asymmetrical or occult balance is similar to the feathers and lead except that



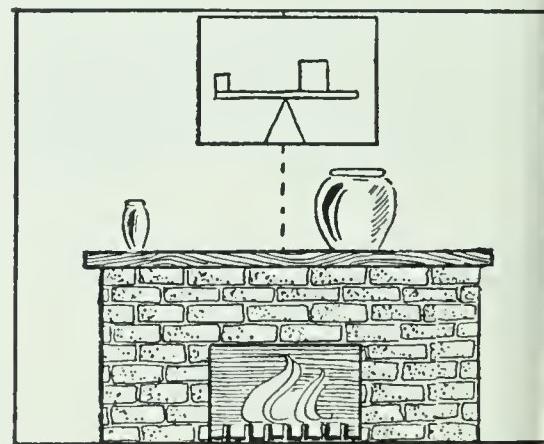
Out of balance.



In balance.



Out of balance.



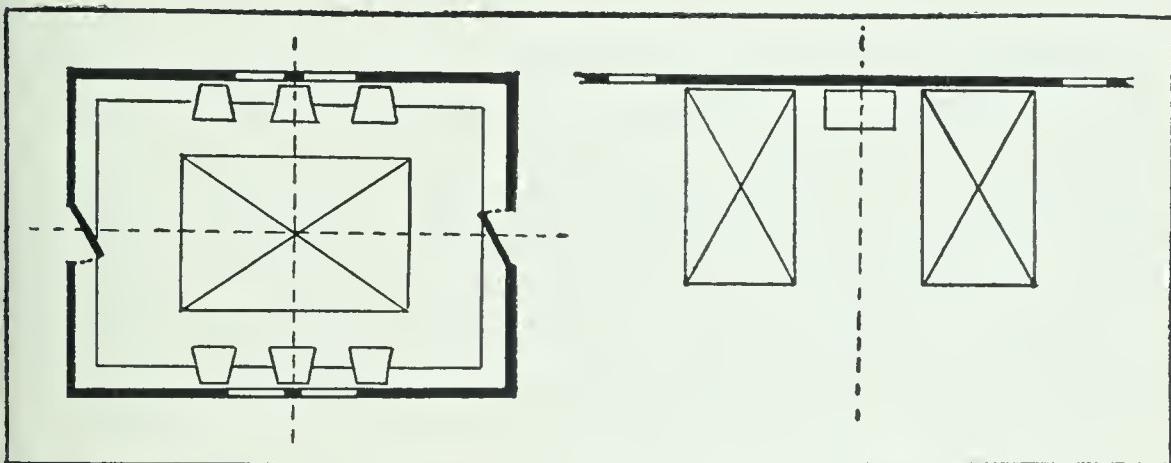
In balance.

Fig. 4. Study the diagrammatic key above the fireplace.

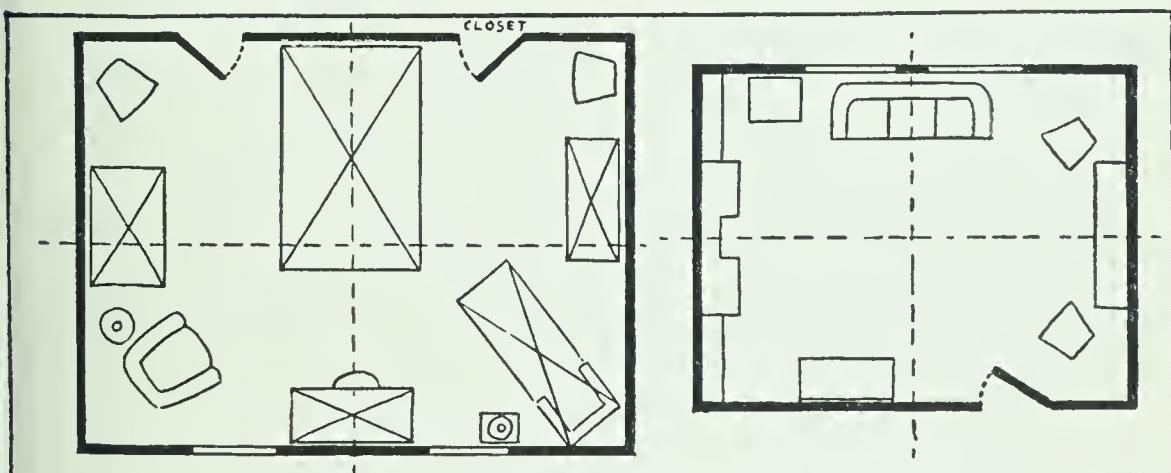
the eyes serve as scales. Because of the strength of colors as well as size of objects, we get impressions of balance. With plain grays the problem can be represented by the objects on the fireplace mantel (Fig. 4).

The addition of color by brightly lighting one window can change the symmetrically balanced front of a house at dusk. Imagine Figure 6, page 355, with the right-hand window

lighted. This window at once becomes the most prominent area. The unlighted gray windows may be so inconspicuous as even to be lost to view. So also if only one object of the fireplace is colored bright red or yellow, it gains attention at once, and the original symmetrical balance is destroyed.



Symmetrical balance of furniture in a dining-room and in a bedroom.



Asymmetrical balance in a bedroom and a living-room.

**Fig. 5. Symmetrical and asymmetrical balance.**

Because rooms have three dimensions and the furnishings used in them are largely three dimensional rather than flat, the problem of balance includes balancing one piece of furniture and one wall with another. By drawing an imaginary line both lengthwise and crosswise of a room, you can create four equal areas in rectangular-shaped rooms. Since dining-

room furnishings are most formal the Figure 5 can best illustrate formal or symmetrical arrangement in the placing of table and chairs.

Bedrooms are sure to provide practice in securing asymmetrical balance and often have good illustrations of formal symmetry also. Twin beds with a bedside stand between illustrate equal balance. Dressers, desks, chairs, chests, and so on, need to be balanced one against another. Though floor plans give only the floor area covered by a piece of furniture, Figure 5 shows both symmetrical and asymmetrical balance in the placing of objects in the same bedrooms. You will note in Figure 6 that room shapes and sizes determine the extent to which there is freedom in arranging furniture, and therefore are a common limitation to good balance.

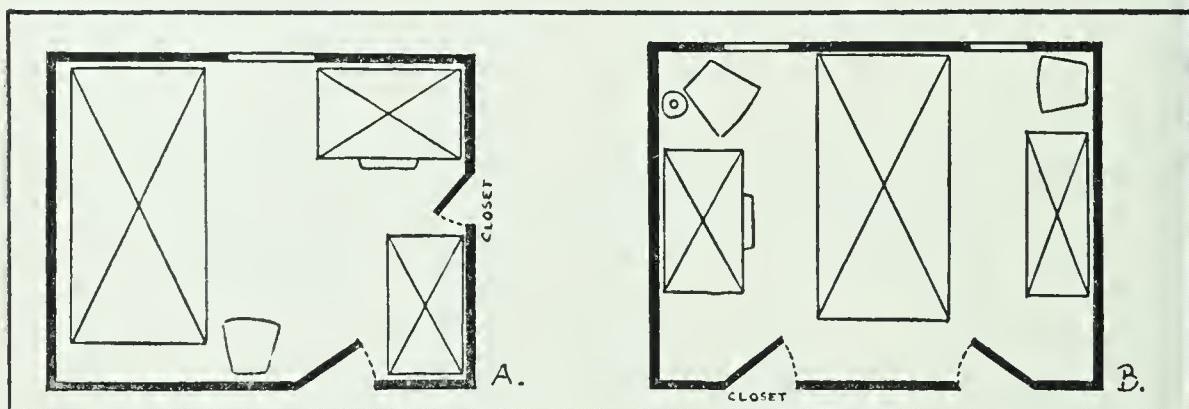


Fig. 6. Two small rooms with limited possibilities for furniture arrangement.

#### COLOR IN HOMES

We cannot go far in the study of home furnishing without being conscious of a need to know how to use colors effectively. To most persons the world is full of color when the sun shines or there are artificial lights, for light is the source of color and the eyes of most persons are capable of responding to color stimulation. The absence of light at night or on a very gray day so reduces the intensity of color that persons with normal color vision see only lighter and darker shades of gray, slightly colored. A small proportion of persons lack

the physical ability to distinguish color, whereas others who are capable of seeing color have given so little attention to it that they do not know either when or why two colors match, nor how to put colors together to get desired results. So many subtle changes can be effected with color that much practice is needed if one would use color for the pleasure it affords.

**Pigments.** Pigments are paints or dyes capable of reflecting colors when in light. There is infinite color variety in them. Any one who has mixed water-colors or dyes is aware of the extent to which one may go in creating it. These color differences are of three types, hue, value, and intensity.

**Hue.** Hue is color. Red, yellow, and blue are three from which others can be made. Red with yellow gives orange, yellow with blue, green; blue with red, violet, thus completing the circle. The raindrop, a diamond, crystal glass, or any other substance that breaks sunlight into its many light rays produces these hues. Study of a color chart or the practice of making a color wheel will show the changes in hue. By beginning with red and adding a little yellow, one first has slightly yellowed red. With enough more yellow, the color becomes yellowed orange, and with a predominance of yellow to greatly dilute red, the hue is yellow in which, with careful observation, one can see a little red. This yellow will just fail to match pure yellow. And so one might proceed around a color wheel with the changing and merging of one color into another.

White is reflection of the perfect combination of all light rays, and black is an absence of them. A so-called white material is capable of reflecting such a perfect mixture of all light rays that one hue cannot be separated from another. A so-called black or very dark gray material absorbs light rays equally and to such an extent that there is no one hue visible.

**Value.** Hue or color is modified by value which is the lightness or darkness of color. Pale pink, or red that is almost white, is the highest value of red, whereas very dark maroon is the lowest value of it. The petal of a dark red rose usually

shows a high value of red near the pistil and a low at the outer edges.

**Intensity of chroma.** Colors are intense or grayed. The red and blue of the American flag are intense colors. The red and green lights of semaphores are intense colors. Brown is a grayed color. It may be made of red and green in such proportions that neither red nor green are readily visible as such. Again orange and blue may be used to neutralize or gray each other with the result that neither orange nor blue are visible. Opposite colors on a color wheel neutralize each other and reduce the intensity of both hues. If red and green are combined so that red still predominates even though almost invisible, we have an example of red at low intensity or grayed red. The color may be called red brown. There are countless examples of grayed colors such as grayed blue that has the name of cadet blue. Mulberry is a grayed or low intensity red; navy blue is again a blue at low intensity as well as low value.

Tan is an example of both high value and low intensity, whereas brown is an example of low value and intensity. French gray is neutral color of such high value that it is near white; oxford gray is neutral or lacking in hue and reflects so little light that it is near black. Between tan and French gray there is distinct difference in hue and intensity though both are high in value. French gray is more nearly neutral whereas tan still shows some definite hue.

The fine art of using color depends upon one's ability to see clearly and balance colors keeping in mind the qualities color possesses. As a means of practice in seeing color qualities it is useful to match thread and fabrics or mix and match paints for woodwork to be used with paper already on a wall. At once one is aware of the effect of light. Thread that matches perfectly under yellow artificial light may be entirely wrong when taken to the sunlight of midday, or thread that is a poor match in bright daylight may show little color difference at dusk or in a poorly lighted room. Paint to be matched with wall paper will show these and other problems, for paint is in

broader areas than thread. It, like thread, has different color-reflecting power depending upon whether it is glossy or dull. So also figured wall paper may have a clearly defined color background with such a fine lined pattern in silver or gilt that it is necessary to take into account the all-over or general effect rather than the background when trying to match paint with it. In other words, for best results, when wall color is to be matched in paint, one should paint sample boards and set them up beside the wall paper in the kind of light that will be used in the room. Paint or enamel that gives the appearance of being white often is faintly tinted to combine better with the wall and drapery decoration. Such subtleties of color combinations give pleasing results of which one is unaware until attention is called to them. Again, good results are so unobtrusive that one may not be conscious of why they are pleasing, though a combination of poorly related colors will stand out as an "eye sore." Colors that should but just fail to match produce this uncomfortable feeling.

**Effect of texture.** Few objects furnish a better illustration of the effect of texture on color than pile rugs or draperies, for in them one can produce a range of changes. If the pile is made of lustrous silk, rayon, mercerized cotton, or smooth wool yarns and brushed flat as in pan velvet, the common rayon bathroom rugs (see Figure 5 on page 270), or deep pile Wilton or Persian rugs, much light will be reflected from the smooth sides of the flattened yarns thus giving a silky luster such as that of satin. If the hand is rubbed against the pile so that it stands up, the light is absorbed or lost in the shadows of the pile. A light-colored rug seems darker when you look into the pile. There is a softer feel in its appearance. Texture in materials gives a tactful sensation even though the object is not touched. In large measure texture due to color is the result of the reflection or absorption of light. Such light-reflecting materials as glass, smooth metals, glossy paint, or enamel give the feeling of hardness and coldness, whereas light-absorbing materials such as wool blankets, velveteen, monk's cloth, pongee silk, look soft by comparison. Satin hung in folds

has a softer, richer beauty because of the fold areas where light is absorbed. Porous brick gives a softer effect than glazed tile, stained shingles a softer effect than painted; fabric upholstered furniture a softer effect than smooth leather. See Figure 11, Chapter 2, for a brick wall of pleasing texture because of light and dark areas produced by combining porous bricks.

**Texture from design.** Texture or sensation of touch is produced in the materials we look at by capitalizing on the reflection and absorption of light. Light and dark areas are so designed as to change the depth or the richness of the general effect. Much of design adds texture. For example, the general effect of wall paper will be changed when covered with an intricate pattern of lighter or darker fine lines of the same hue. It will seem softer than a smooth, solidly colored surface. Printed design drapery fabrics, satin damask table-cloths, and other Jacquard loom textiles are examples of fabrics that have texture because of the contrasting of light and dark through the use of design. There are light-reflecting and absorbing areas. Brick may be laid in patterns that add texture to wall surfaces; beautifully grained wood gives pattern contrasts of light and dark; crackle glazed china has richness of surface as the result of an all-over crackle design beneath the hard surface of the china.

Much of the interest and beauty of furnishing results from texture. The same general color arrangement in materials of different texture give wholly different effects. Rich furniture wood colorings, and patterns need rich effects in the fabric used with them. When velvets, velours, satins, or rayons are not desirable either because of cost or the difficulty of keeping them clean, rich contrasts of color in printed cotton or linen draperies may be more suitable and give just as desirable an effect.

Curtain materials are largely of thin airy fabrics through which sunlight can filter. They give a feeling of filmy freshness. Draperies are likely to be heavy though softened with deep folds. Casement cloth if made of thick cottons or linens is

neutral color is neither filmy nor rich in color though it may push back against the window frame in deep heavy folds and thus take on some richness of effect.

Reed, cane, canvas, and metal furniture feel good to the eye on a hot day. A freshly washed brick or partly glazed tile veranda floor shaded by trees may give the cool effect of deep woods. In countless ways we suggest to the eyes feelings that may not coincide with those of actual touch. Texture is of wide variety and adds infinite possibilities to furnishing. The problem is to choose furniture and fabrics with feeling qualities that harmonize and are likewise appropriate to the use that must be made of them. Figure 7 of a small bedroom furnishes a good illustration of rich texture in thin cotton fabric through the use of light and dark in design. One india print is used as a bedspread and a second divided to use as curtains. See pages 139, 339 and 349 for texture in walls and pages 184, 185 for texture in curtains.

**Combining colors.** If we choose to produce the effect of activity, strong or intense colors are used in bold design. The expression "noisy colored" makes one think of a Fourth of July celebration or a circus, with gay flags or banners in riotous confusion. Contrasts are vivid, and the eyes may become quickly tired in an effort to move rapidly from one color to

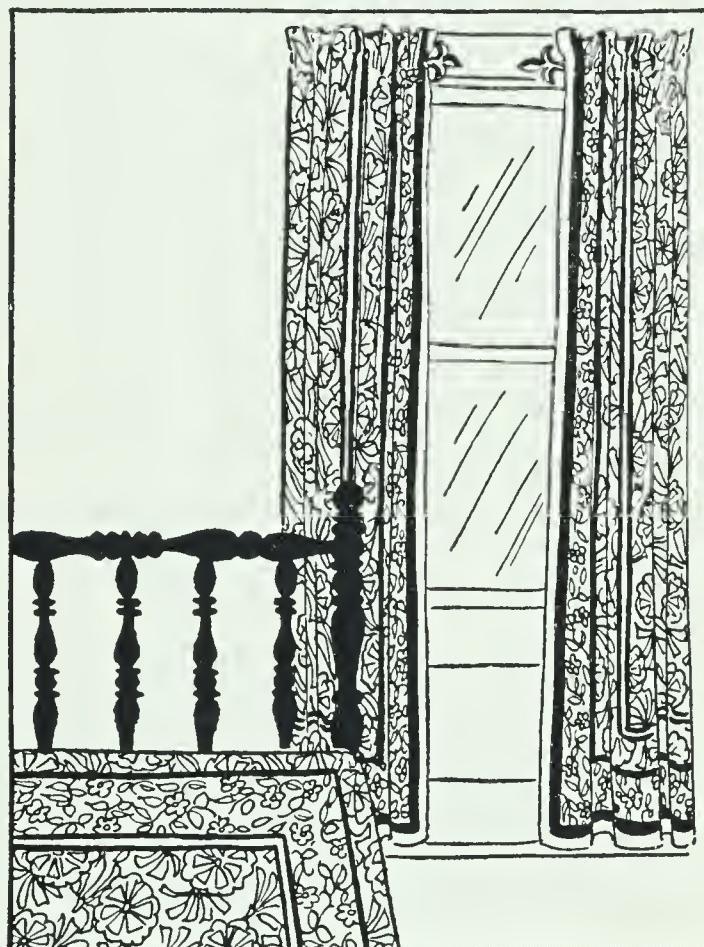


Fig. 7. India print bedspread and curtains.

another. The opposite extreme or quiet effect results from little contrast. Neither one extreme or the other is commonly welcomed for home decoration, unless per chance one decorates a game-room in strong, gay colors for a party or subdues the room colors for an ill person. For homes one usually wishes enough of color balance to produce cheerfulness and avoid dullness or monotony. Large areas may be of the less intense colors with occasional accents of strong hues.

**Color relationships.** Color relationship can best be grasped from a color wheel. Out of the variation from red through orange to yellow, or yellow through green to blue, or blue through violet to red, one can select pairs of adjacent colors that combine pleasingly with each other. By using them in different intensities or values more variety and better balance may be obtained. Intense red-orange and yellows make a bright combination suitable only for a very dark room. Softened yellow or deep cream walls and woodwork with Chinese red in the design of window hangings give a light cheerful effect without harshness. Chinese red has little yellow. This combination is a better balance in the use of adjacent colors because the color of the large area is not intense. Equal areas of intense yellow and red are violent and likely to be annoying.

The addition of a blue-green jar or other bit of blue-green into this room would add a color that is complementary to the Chinese red. Complementary colors or those opposite each other on the color circle are in strong contrast, and hence should be used in low intensities or balanced areas. If one is used at very low intensity, it may be possible to add small amounts of the other at high or full intensity.

**Color effects.** The same general color may be used with so much variation in value or intensity that no hard and fast rule can be given for securing good effects; however, certain results may be counted upon in a general way. Yellows reflect light well and are cheerful like sunshine. They can be used in dark rooms to brighten them. High values of all colors are dainty, clean, and cooler in effect than the same hues in low values. Low values can be used for richness and warmth.

The lighter or higher values of yellows, greens, and blues are cooler in effect than the paler purples, reds, and oranges. Cool effects can be obtained, however, in bedrooms where lavender or pinks are especially desired by using much cream or extremely light gray also.

Homes have infinite possibilities for pleasure through the use of color if one understands how to work for the color effects desired and is interested in studying and cultivating tastes in color. The child whose tastes are not cultivated is attracted by brightness with little attention to the subtleties of color. Only handling of colors with interest directed to the effects that can be produced gives facility in their use. Discussion or reading about colors cannot be substituted for practice if one is to enjoy them.

**Center of interest and emphasis.** If you wish some one element of a poster to stand out above all others, that portion should be placed where it will be seen at once and where the other parts contribute to it. By color contrasts attention may be focused upon it. Beautiful pieces of furniture, a picture, a window arrangement, a fireplace, wall hanging, or piece of pottery, are among the many centers of interest to be found. Figure 12 on page 360 shows a window that is obviously a center of interest. This window makes use of the view beyond and in this sense is like a landscape painting. The garden is the picture. The window is its framing in the room. Figure 4, Chapter 2, is another illustration of a window used as a center of interest. The transition from house to garden is but a step beyond glass. It is easy to imagine a room in the foreground arranged with a deep couch, coffee table, and chairs faced toward this window.

A fireplace is another center of interest. Historically it was center of interest in the most highly functional way, for it was the source of heat to warm the room and cook. Most of the indoor activities were carried on before it. The historic function is preserved only to a limited extent in modern houses. Figure 8 shows a very informal arrangement where attention is focused on the fireplace.

When a painting or wall hanging is to be the center of interest in a room, care should be taken that the walls harmonize with it and that the wall-paper designs do not detract from it. Plain paper or an indistinct all-over design rather than a large bold figure will stay in the background. Plain painted furniture will be emphasized by being placed against figured wall



*Courtesy of "Better Homes and Gardens."*

Fig. 8. An informal living-room.

Decorating books say, "Never place the sofa in front of the fireplace," but when a room like this is so comfortable, practical, and expresses individuality in its arrangement, such a rule may be disregarded.

paper since by contrast it is more quickly seen. A piece of fir veneer furniture has much wood pattern and may need a wall background rich in texture and color but without figures such as one might get with canvased walls, heavy plain wall paper or plastic paint.

Emphasis can be given to but one center of interest; hence overcrowding of rooms must be avoided. No one, in a row of equally interesting pictures, stands out. Each might be a center of interest if it alone occupied a wall.

## FURNISHINGS FOR FUNCTIONAL NEEDS

**Function.** What is the work, the use, or function of furniture? Why have it? From time to time these questions must be asked if the real beauty of furniture and home furnishing is to be preserved or new beauty created. In efforts to be decorative, furniture and fabrics have often been designed so ornately that they failed completely to be beautiful. The Victorian days of what-nots, big flower medallion rugs, stiff sofas upholstered with slippery horsehair, and bulbous-legged pianos of uncertain design were an era in which function had been almost forgotten in the effort to be decorative. Most rooms were tortuously formal, stuffy, and uninviting.

At the present time efforts are being made to design furniture to meet modern needs. The functional elements of designing are stressed. It is not strange to find some of the most successful examples of good functional designing in kitchen and bathroom furnishings where use is of first consideration and beauty is achieved through good proportions, graceful lines, pleasing texture, and color effects. Among refrigerators, gas and electric stoves, there are notable examples. Like many automobiles a minimum of applied decoration is used, but the essential parts are made in graceful shapes that fit their purpose. Gas and electric stoves are beautiful in their extreme simplicity. Functionally graceful lines and hard sanitary surfaces, often in beautifully colored enamel, are used without other decoration. See Figure 9. In kitchen furnishings there is less temptation to add scrolls, medallions, flowers, vines, and the like, merely for the sake of elaborateness. Heating stoves were and continue to be different for often meaningless scrolls and gawgs form decoration that detracts from the possible beauty of good proportion, graceful line, and rich metal colors.<sup>1</sup> To design functionally or to select furnishings to serve well the purpose for which they are needed means keeping constantly in mind how, where, and in what combinations they

<sup>1</sup> For a series of illuminating photographs see pages 247 to 368 of *Architectural Forum* for October, 1937.

are to be used. A chair is to be sat upon, and hence to be comfortable it must fit the human figure while in the sitting position. The height of the legs must be in relation to the length of human legs from the knee down. Functionally good chair backs are not straight upright supports but subtly curved panels that conform to the human figure, giving support where needed for rest. Beds are for sleeping and should be designed in relation to the length of children or adults.



Fig. 9. A functionally designed gas stove.

Delicately tinted enamel, simplicity of curves in handles, and lack of meaningless decoration make for beauty and use.

high sides prevent falling. Beds for young children should be low for easy access.

Busy city life creates a need for highly functional furnishings that are beautiful because they serve their purpose well. Beauty is a problem of good proportion; graceful lines; lovely texture in paint, wood grain, or fabrics; and pleasing colors. Decoration will be used only to emphasize the fine and graceful lines of construction.

When furnishings are functional, they will be well adapted to use and hence appropriate. The log cabin with simple rustic

lines and rough materials is functional. The modern house with its smooth, simple, and graceful lines is functional. The modern furniture with its delicate tinted enamel, simplicity of curves in handles, and lack of meaningless decoration make for beauty and use.

furniture; grass, rag, or skin rugs; heavy casement-cloth curtains that can be drawn together for privacy or pushed into tight folds at the side of the window if light is desired, illustrates appropriate furnishing.

Functional bedrooms for high-school students will have, in addition to beds, dresser, and the furnishings essential to sleep-



*Courtesy of Farm Security Administration, Photograph by Rothstein.*

Fig. 10. Furnished for function.

thought was given to both use and beauty in this small dining-room, furnished with simple dignity. The exterior of this house is shown on page 139.

g and dressing, desks, places for books, comfortable study chairs, and good lights where they can be used without eyestrain. Functional hotel or tourist rooms will have suitcase stands in addition to other needed furniture.

**Appropriateness.** It follows that functional furniture should be appropriate but merely being functional does not ensure appropriateness. Appropriate furniture and furnishings fit their

purpose and fit the whole. A piece of highly functional modern furniture in a Victorian room is obviously out of place and inappropriate. Inappropriateness makes for an inharmonious whole.

To be harmoniously appropriate furnishings should be planned as a whole and in a scale to fit the house and manner



Fig. 11. Modern dining-room furniture showing the Duncan Phyfe influence.

of living in it. To recreate a Colonial mansion, the furnishing would be rich, elaborate, and probably hard to keep dusted. Chair seats or settees would be broad to accommodate long skirts. Canopied beds were indulged in then as now for decorative effect. The time was, however, in more primitive days when long curtains around the bed were needed to keep off drafts and provide privacy. Ruffles at the top of Colonial canopy beds were and still are merely remnants of early functional curtains.

Furnishing at present is still a problem of using designs that have been handed down through history. Magazines and new-

papers that carry furniture advertising are full of designs showing the influence of earlier days. The problem when combining them is to get harmonious effects under modern conditions of living and building.

The design of the furniture, Figure 11, is of historic origin as is also that of Figure 12. Observe how different in spirit



*Courtesy of "Better Homes and Gardens."*

Fig. 12. A sample room furnished with Shaker furniture.

The design of this straight line, sturdy furniture was inspired by historic furniture built by the Shakers, a religious sect on the northeast coast.

They are. In Figure 12 furniture of sturdy simplicity is highly functional and appropriate to a city apartment or farm house where good effects are desired with little housekeeping effort. On the other the furniture is graceful in line, lovely in wood

pattern, and suggests more luxury of curtains, china, table linens, and rugs. To be beautifully used and kept means more formality of service and more elaborate housekeeping. Each is a harmonious whole but appropriate to different types of houses and living. The Duncan Phyfe would fit beautifully into a house of Georgian architectural style, while that of Shaker origin is more appropriate to the house of Figure 15 on page 366, or an apartment with plain woodwork and walls.

The outline on page 188 is merely a concise way of showing types of rooms common to domestic building and of indicating uses. As you discuss the points indicated, you will be able to expand the list and describe illustrations of these points from experience.

**Household fabrics like furniture may be designed and selected to emphasize function.** Perhaps the best example of non-functional use of household furnishing is the prevalent custom of rolling shades down from the top of windows. The chief function of shades is to increase privacy and interfere as little as possible with sunlight in the house. If shades were rolled from the bottom up, they would be more functional and could be adjusted to space the window as well. Venetian blinds have the advantage of being easily adjusted to let in light while fully drawn though still maintaining privacy. Functionally the most serious objection to them is the amount of dusting required and the cost of repairing them as they grow old.

Functional draperies and glass curtains are closely related to shades. Glass curtains obstruct the view from outside to a considerable extent while shutting out a minimum of light, if they are very sheer and hung rather plain over the glass. Almost all draperies keep out light as well as view if they are wide and adjusted to fit over the entire window. Brackets permit of swinging and hence make it possible to open draperies easily during the day and bring them together at night. Poles and chains or cords serve in the same way and are more satisfactory for broad windows.

Floor covering serves several purposes. In loosely built houses where the floor is but a single layer of fitted boards,

considerable amount of air from the outside filters through, and rugs or carpets help to make the floor and room warmer. They also make the floor softer to the tread. Deep pile rugs are very soft; uncut brussels, somewhat less soft though resilient; linoleum harder than carpeting but softer than wood, tile, or cement. Without carpets to take the shock of walking and the strain of standing, rubber-heeled and soled shoes often need to be used.

Floor coverings serve another purpose often overlooked, namely that of covering and protecting the floor beneath. Varnish, paint, and wax wear off with walking, and rugs or carpets may be needed to protect the floor. Custom has so trained the eye that floor coverings may be said to serve the purpose of satisfying the eyes. A living-room with a rug or carpet as well as a fireplace looks warmer and more cozy than the same room with a bare floor. In the dining-room where food may be accidentally spilled, families with children often avoid the use of rugs or carpets that are hard to clean, by using linoleum which is more easily cleaned and now made in attractive designs suitable for informal dining-rooms as well as eating porches and kitchens.

Bed coverings in general are for the purpose of protecting bedding during the day. Both the elaborate and simple are functional in this way, but some coverings are sturdy enough to be kept clean with ease, while others are dainty of color and delicate of construction. They are functional only to a limited extent. Badly mussed or dirty covers lack beauty and hence fail in the function of making the bed look better while not in use.

**Durability.** Durability often is so closely linked with the functional planning of furnishings that there is no distinction between them, but functional furnishings are not always durable. They may serve the desired purpose without lasting. Theatrical gauze is open of weave and a suitable textile for curtains where a light airy effect is desired, but it rots quickly in unlight and is so loosely woven that the threads easily work out of place with laundering. It does not rate high for durabil-

ROOMS, THEIR FUNCTION, AND GENERAL GUIDES TO DECORATION

<i>Room</i>	<i>Purpose</i>	<i>Shape and Size</i>	<i>General Guides</i>
Living-rooms	Common meeting place for members of family and the entertainment of callers and other guests. May be general living-room where games are played and a variety of social activities carried on. Informal living.	No characteristic shape. Oblong most ideal shape for furnishing and use.	Informal furniture and arrangement. Emphasis upon comfort, sociability and friendliness.
Reception room, Parlor	Formal room for occasional use.	Large, preferably oblong.	Rich formal furnishings formally arranged. Heavy draperies, elaborate paintings, carvings, deep pile rugs.
Library	Reading and living-room	Plenty of wall space for book shelves, good windows for light.	Book shelves, comfortable chairs, good lamps, desks, etc. Fire-place pleasant addition.
Music room	May be informal practice room, or room for entertainment of friends. Often combined with library or other room.	Small for practice room, large for studio.	If a practice room only, piano, cabinet, stool, victrola and records, radio. If studio, comfortable living-room furniture in addition.
Sun porch or Living-room	Informal living space.	Commonly small.	Reed or wicker couches, with cushions, chairs, tables, radio, newspapers, current magazines, books, etc.

	only. Wall fourth side thus increasing privacy.	Small, square or oblong.	Little decoration except on walls. Radiator, costumer, or place for wraps, rubbers, and umbrellas chief furnishing. Rug of durable type, easily cleaned.
Entries, Vestibules	Place to enter and leave rubbers, wraps, etc. Helps to keep shoe and other dirt from rest of house.	Thoroughfares between rooms. Reception and waiting area.	Formal decoration. Impersonal pictures. Flat designs for walls unless plenty of space for viewing pictures. Straight-backed chairs, settees, tables for telephone, calling cards, mail, etc. Durable rugs or carpets.
Halls		Mainly long and narrow.	Hooks, hangers, containers for rubbers, umbrellas, golf bags, children's outdoor playthings, work clothes, etc. Lavatories, toilets, dressing table, chair. Linoleum or other easily cleaned floor.
Closets Wash rooms Lavatories Powder rooms		Usually small, often irregular shape, occasionally under stairs.	Storage of things to be disposed upon entering house. Place to wash without going to a second-floor bathroom. Keeps unsightly objects out of view and is aid to order in living-rooms.
Bedroom	Sleeping and dressing	Oblong and large enough for needed furniture.	Bed, dresser, chairs, dressing table, chests, and chests of drawers. Chaise lounge, lamps, desks.

**Rooms, THEIR FUNCTION, AND GENERAL GUIDES TO DECORATION (Continued)**

<i>Room</i>	<i>Purpose</i>	<i>Shape and Size</i>	<i>General Guides</i>
Sleeping porch	Sleeping	Small	Bed, bedside table, chair, bedside rug.
Dressing room	Dressing	Small	Closets with rods and hangers, drawers, places for shoes, hats, etc. Dressing table and chair, good lights.
Bath	Personal care	Preferably oblong. Toilet separated from bath more convenient.	Shower, tub, lavatory, toilet stool, cupboards for towels, clothes hamper, or shoot to basement laundry.
Game room Rumpus room Play room		Large, in basement or on top floor. Easy access without going through rooms of house.	Game tables, lockers, closets, or cupboards, sturdy chairs and benches. Durable, easily cleaned floor covering, bright cheerful colors.
Garage	Storage of automobile.	Basement, semi or fully detached room at ground level. Enough larger than automobile to walk easily around it.	Shelves, benches, stools, cupboards, tools.
Dining-room	Serving meals.	Oblong best, may be large and formal or small and informal.	Flat wall design, panels, plain walls with fruit, flower or landscape pictures. Dining table, chairs, china closets, buffets, sideboards, serving tables. Easily cleaned floor coverings.

Breakfast room	Informal dining-room.	Small, often a sun porch or alcove from kitchen.	Painted furniture, print curtains, linoleum, or other easily cleaned floor.
Dinette	Informal dining-room.	Small, often a portion of kitchen.	Painted wood or metal, reed or other informal furniture that is more or less related to kitchen.
Kitchen	Preparation of food, work room.	Oblong. If planned for one worker, small.	Stove, table, stools, refrigerator, cupboards, sink. Materials: metal, porcelain, enamel, or painted wood; tile, linoleum, or varnish for floor.
Butler's pantry	Preparation of salads and deserts, setting out of silver and china for serving. Washing of dining-room china, glass, and silver. Needed only where formal service is used.	Small, between kitchen and dining-room.	Sink with broad drain boards, shelves, refrigerator, china cupboards. Work surface for making salads and desserts.
Store room	For food. Also attic for clothing and other articles out of use.	Small, preferably oblong for food. Attic or other available space for trunks, furniture, etc.	Shelves, cupboards with place for labels. Metal, glass, and other necessary containers.

ROOMS, THEIR FUNCTION, AND GENERAL GUIDES TO DECORATION (*Continued*)

<i>Room</i>	<i>Purpose</i>	<i>Shape and Size</i>	<i>General Guides</i>
Fruit cellar	Keep preserved foods.	Cool, ventilated, dark room.	When in rural basement, racks for potatoes and other vegetables or fruits to be kept fresh. Cupboards or shelves for preserved foods. Electric light when possible.
Laundry	Washing, ironing, or mangling clothes.	Well-ventilated room, large enough for equipment.	Set tubs, gas plate, washing machine, ironing board, mangle, clothes rods, gas drier, cupboards for soap, starch, etc., baskets, good drains, rubber mats, or low standing bench if cement basement floor. Walls whitewashed, or painted white or cream.
Service yard	Hanging clothes to dry. Sometimes used for outdoor work area.	Usually small fence-enclosed yard.	Clothes lines, benches. Cemented or sodded.
Garden house or room	Storage of garden tools, occasionally starting of seeds for transplanting.	Small semi-detached room at rear of house or small building in garden.	Shelves, cupboards, benches.

ity. Mercerized cotton casement cloth is silky in appearance and launders beautifully for a long time. For casement windows where a single hanging is used, this type of fabric may be beautiful, functional, and durable. Rayon bed-spreads that are usually rich in color and texture may be the best selection for a pleasing effect with certain styles of furniture, yet highly perishable. A single dry cleaning or laundering can so soften and break the yarns as to leave a weak, rough, fuzzy surface. See Figure 13 which shows a cheap rayon-cotton combination that shrunk ten inches in length and in which the yarns broke with one washing.

There are ways of testing for durability. Some fabrics must be durable to sunlight, that is, they must fade or rot very slowly when exposed to sunlight. All fabrics can be expected to undergo some change; if it is very slow, it is not easily observed, and the fabric or object has the appearance of newness over a long period of time. Ordinary and spar varnish may have the same new appearance, but ordinary varnish spots with water and heat whereas spar varnish is more resistant. Thoroughly seasoned and kiln-dried furniture wood may look the same when new but if the kiln drying was rapid and uneven, the furniture will warp when used in the hot dry atmosphere of a house or apartment. See Figure 14 to realize the extent to which wood shrinks with drying. Fugitive and permanent dyes will look the same in new fabrics, but the fugitive dyes will fade when the fabric is laundered or exposed to sunlight.

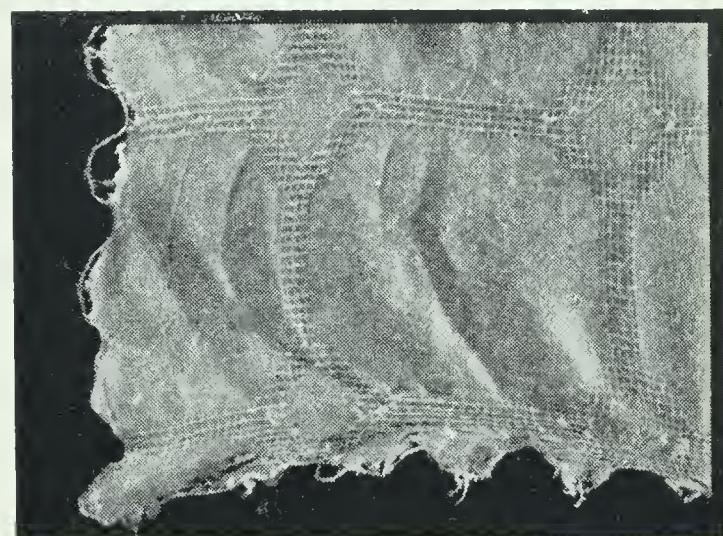


Fig. 13. One corner of a cotton bedspread after the first washing.

The shrinking of some yarns caused puckering and pulling away of the stitching that bound the edges.

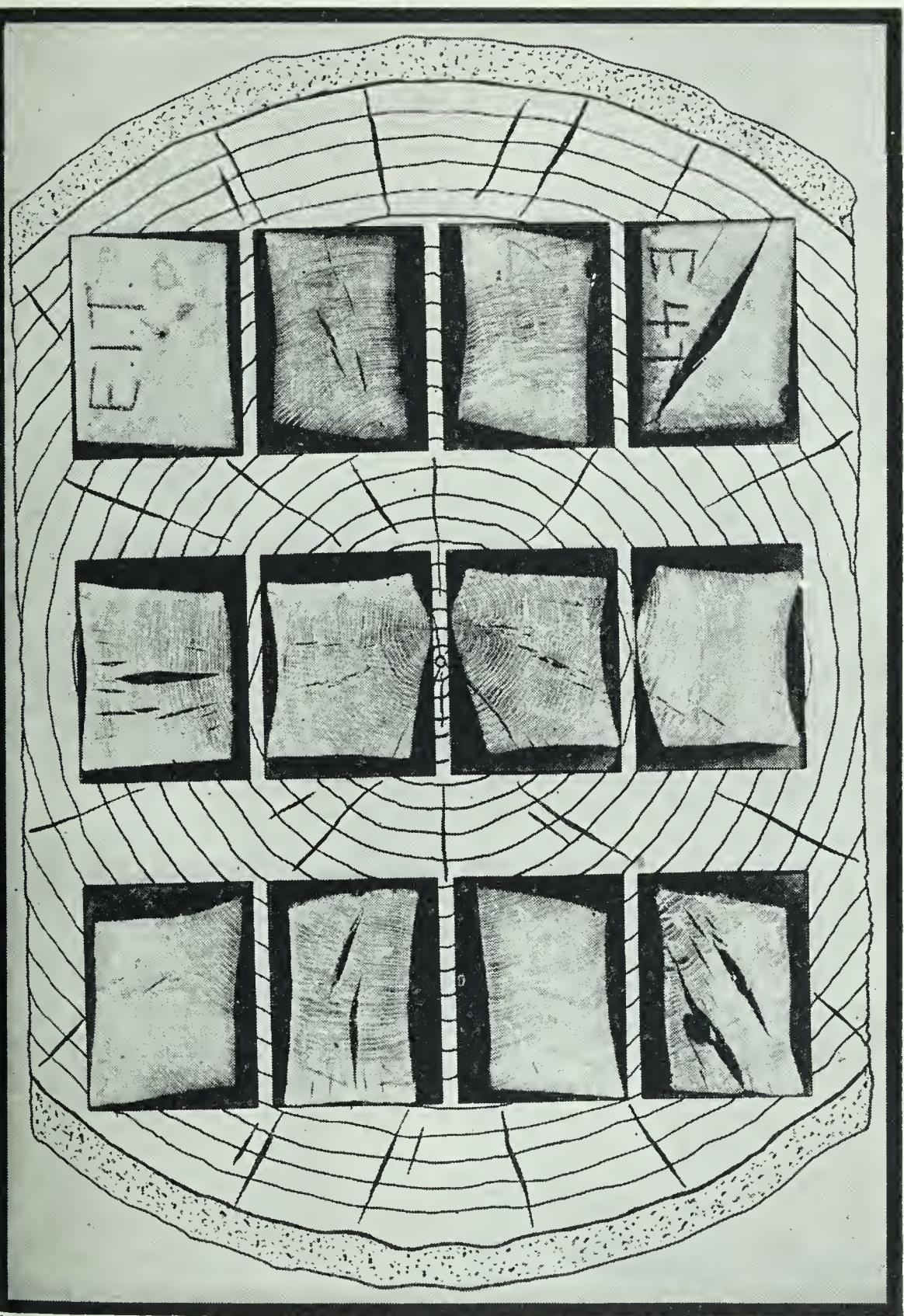
Some household fabrics such as upholstery and rugs or carpets must be durable to sweeping and beating, and furniture surfaces must be durable to washing, or cleaning with furniture polish. Woods must be durable not only to weight and handling but to room atmosphere also. Household furnishing is not alone a question of choosing good designs and pleasing colors for the moment, but of choosing those of such a kind that they may be depended upon to keep their beauty as long as needed.

**Historic influence and style.** Every age inherits styles from previous times. Beginning with the present it would be possible to trace back first to Colonial times and then to Europe for the origin of designs in modern pieces of furniture.

The Duncan Phyfe dining-room, Figure 11, shows graceful curves in the chairs, restrained construction lines, handsome wood, and table-leg design highly characteristic of the Duncan Phyfe style. Duncan Phyfe was an early American designer whose work has been revived and copied.

Windsor chairs were made and used in Colonial times, as were also ladder-backed chairs. Gate-leg tables, carved pie-top tables, side boards, highboys, and blockfront desks are further illustrations of different pieces of furniture that have been copied with few changes from historic pieces. Overstuffed furniture is more definitely modern in design. Historic influence and style in design is a lengthy though most fascinating study that many of you will want to follow further by means of the references given.

**The human factor.** Home furnishing contains a human factor unlike that in magazine or newspaper advertising and store-window decoration. It shows the effect of personal tastes and habits of use. Except as a group plans the furnishing, it is apt to be like the apartment that is furnished in "perfect taste" by a decorator but expresses nothing of the real family life. The covers of the books on the library shelves may be chosen more for the color of their bindings or jackets than for interest in their contents; the piano may be designed in perfect harmony with the room, but never played except by a guest; the



Courtesy of the U. S. Department of Agriculture, Forest Service.

Fig. 14. Cross-section of a Southern swamp oak tree showing how wood shrinks with drying.

The black rectangles represent the green size and the exact location of the pieces in the tree. The dried pieces exhibit in exaggerated form many of the common drying defects, such as checks, honeycomb, diamonding, and even cupping.

*Good*



*Bad*

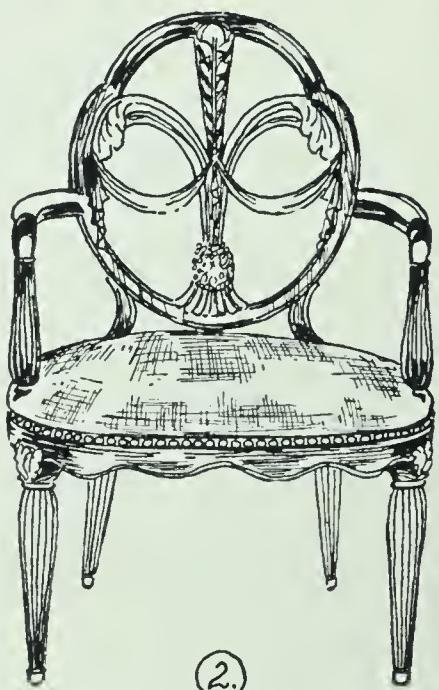
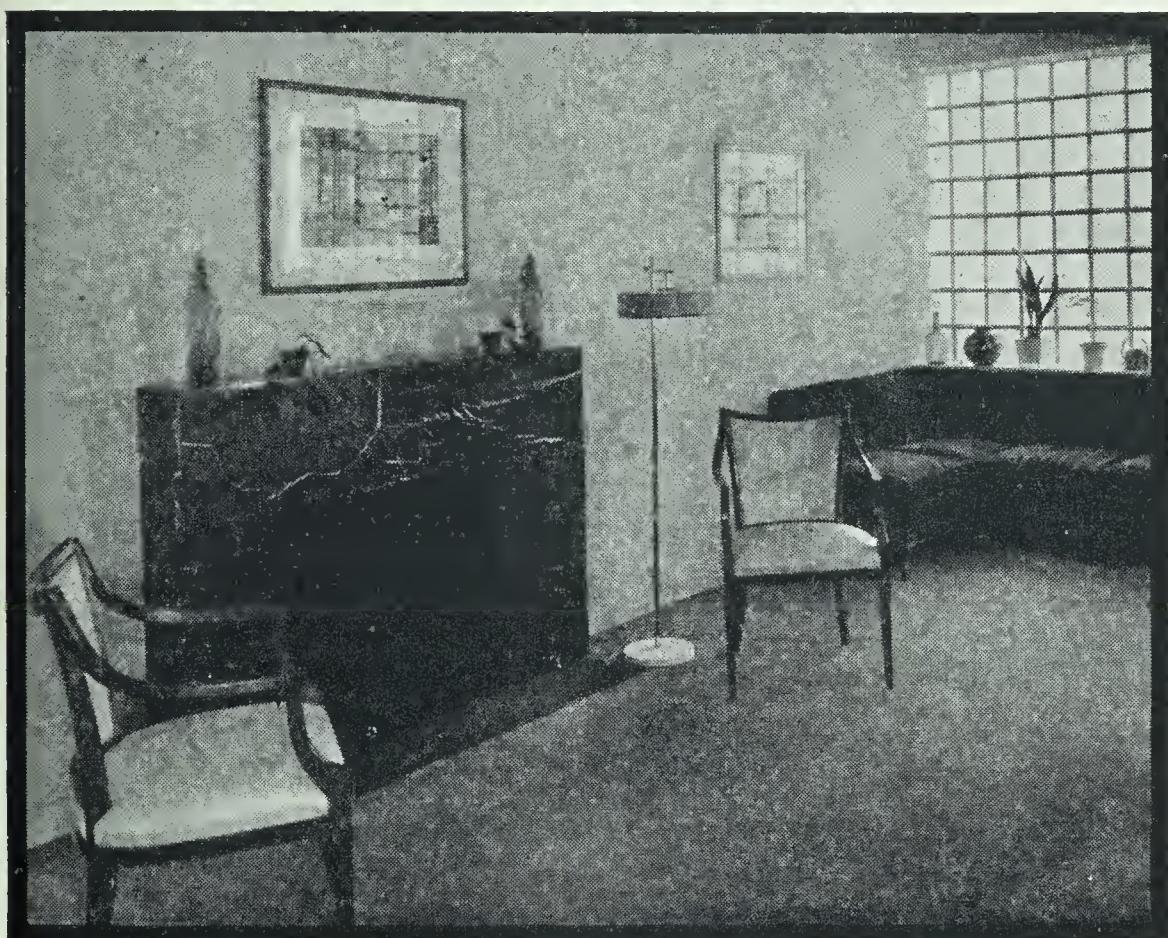


Fig. 15. Modern furniture inspired by the styles of Hepplewhite and Chippendale.

In the good column the chairs are well proportioned, restrained in line, and appropriately upholstered. Chairs 2 and 4 are over-decorated with badly proportioned legs.

dining-room furniture may be faultless though the family prefers to eat in the kitchen.

When because of custom, tastes, work, or for other reasons one lives in the kitchen, it is important to put one's best efforts into making it as attractive and livable as possible. Such furnishing is genuine and hence an honest expression of the group.



*Courtesy of "The American Home."*

Fig. 16. Modern furnishing in which beauty is achieved.

Through good proportions, refined and graceful lines in chairs, rich contrasts of light and dark, and restraint in decoration.

One of the joys of real art is freedom to work at a problem, trying it out first one way and then another, and deciding from time to time why a selection or arrangement is good or bad. One's own room is always the safest place for such testing unless the entire family group is interested and has similar tastes and knowledge for participating in a living- or dining-room project. Personal tastes vary so much that serious arguments

may arise. Though differences of opinion are stimulating and interesting, serious arguments without a basis for satisfactory decisions may leave much bad feeling and spoil the joy of trying to create a more beautiful and pleasant place to live.

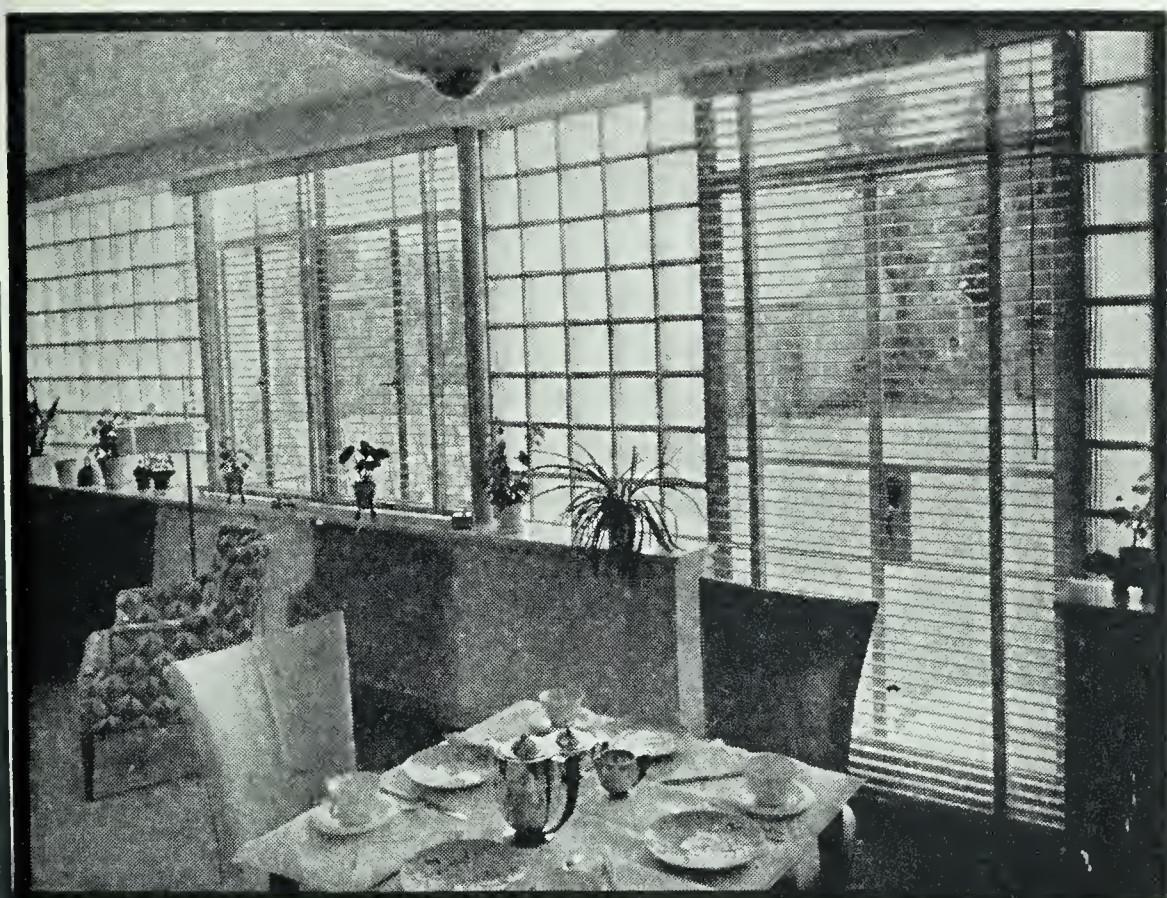
One's inspiration for house decoration most commonly comes from such sources as books, magazines, furniture shops or stores, the homes of friends who have given thought to selection and decoration, or art museums. But getting an inspiration differs from reproducing what one has seen.

Study of decoration will call for discovering why a room was enjoyable. Was it because of the effect of the colors used, the graceful comfort design of the furniture, or the unusually interesting way that it was arranged? There are reasons. The puzzle is to discover what they are.

The rooms that one creates for home use though inspired by illustrations must differ from the illustration for a number of reasons. Rarely does the home furnisher start to work with the same motive or conditions as those of the commercial decorator. The commercially attractive room is for the purpose of selling furniture or furnishings while the home room is to give a maximum of comfort and esthetic satisfaction to several persons who see and use it constantly. Often they do not share the same interests nor enjoy identical tastes in furnishing. To furnish so that all members of the family are satisfied and good taste is expressed frequently calls for as much tact as artistic ability. It may mean educating every one or selling an idea. The person who takes it upon himself to make changes in the home faces a different set of problems from those of the commercial decorator though the general materials with which both work are the same.

The conditions for home furnishing differ in that there will be furniture to be used over from year to year. Even in the case of newly weds the situation often is not one of freedom to work from the beginning for if there has been a wedding with presents, there will be an assembly of gifts representing the tastes of as many persons as objects. The choice, in the practical problem of furnishing, may become one between of

fending a friend or sacrificing a desired effect. Rarely is a room completely redecorated and refurnished at the same time. If there are several pieces of furniture, rugs, or draperies to start with, and these are poorly related to each other in design, texture, and color, there will be a problem of selecting, pos-



Courtesy of "The American Home."

Fig. 17. A living-room dining-room combination in a modern setting—walls of glass brick and windows decorated with venetian blinds.

bly refinishing, covering, or separating through placement in remote parts of the room.

Since the problem of the commercial artist is to sell, he so places the piece of furniture or the assembly of pieces that attention is at once focused in the direction he desires. He conveys his message not in words but in masses of color and designs. So too the furnishings of homes convey feelings and ideas. It may give the impression of being formal and friendly or formal and austere. Cold, cozy, gloomy, cheerful, restful,

tiresome, barren, fussy, shabby, and so on, characterize different room effects.

A room may welcome or repulse. It may express constant use or seem opened "just for the occasion." Living in rooms adds characteristics not inherently a part of the furniture. This is not easy to take into account when planning the redecoration or furnishing of rooms. Occasionally decorators put magazines, bowls of apples, and popcorn beside a fireplace; an artificial



Fig. 18. A bedroom study furnished with some old pieces and some new.

bird in a cage, or a stuffed cat or dog on a rug beside a chair to simulate use of the room, but this has an insincerity that unless artfully handled is likely to be more amusing than beautiful since rugs and furnishings are not chosen as a background for the much loved family dog of brindle color. Though the decorator may be able to choose the properly colored coat of fur that doesn't shed on the furniture, the home-maker is limited by a specific set of circumstances. Home use puts ne

elements into the original problem of assembling to create a harmonious whole.

This does not imply that the art principles of balance, proportion, rhythm, and emphasis have less importance, but rather that more familiarity and practice are needed if they are to be used well and with freedom. In home furnishing one is beginning with a more complicated problem than that of making a paper design. Paper designs furnish highly useful practice, but they are only means to ends when applied to home furnishing. So too the placement of furniture in a model school-room offers most excellent practice in studying formal and informal arrangement or color harmony, but it also is a means to an end. It is but part of the home problem.

In the home one must begin with the family as well as the existing walls and furniture. There may be one small living-room for several persons of diverse interests. The problem is to create as harmonious a whole as possible under existing circumstances. It may be necessary to ask who uses the living-room. Do those who use the living-room have rooms of their own where personal interests can be provided for? What interests have family members in common? What furniture is needed to satisfy these common interests? To what extent does the existing furniture harmonize in design and color? Could inharmonious pieces be removed or replaced? How can the walls be decorated to make a suitably pleasing background for the furniture? How can the furniture be arranged to give a balanced appearance and still be in the places where most comfortably used?

#### SUGGESTIONS FOR STUDY

1. Make a collection of pictures of furnished rooms that you especially enjoy, and write a caption for each telling what you consider best about them.
2. Describe the kind of furniture and furnishings you would like best if you could furnish a room at home for yourself. Be sure to include reasons for your choice.
3. Find a good example of symmetrical or formal balance in a

book or magazine, make a tracing, and with water colors or crayons color it to create a definite effect. In a caption below tell what effect you tried to get and how.

4. Find an example of asymmetrical or informal balance, trace it, and again color it being careful to preserve its balance.

5. Using the school dining-room, arrange the furniture according to formal balance.

6. Make a collection of tracings of well-designed furniture, and show how it is well proportioned and appropriately decorated.

7. Arrange furniture in such a way as to make a picture, a fireplace, or window the center of interest in a room.

8. Measure some rooms, and make accurate floor plans for them, letting one inch on the plan represent a foot on the floor. Also measure the base of pieces of furniture you feel would be suitable to use in the room, and make floor plans to scale for each piece. Cut out the plans for the furniture, label, and arrange on the floor plan. If it is possible actually to use this same furniture in the room, you can check upon the effect your floor-plan arrangements would produce.

Study the illustrations of the portfolio sections.

#### REFERENCES

- Architectural Forum*, Domestic Interiors, October, 1937, pp. 247-368.  
Series of illustrations.
- DEGARMO, Charles, and WINSLOW, Leon, *Essentials of Design* (New York, The Macmillan Co., 1924).
- THORNE, Mrs. James Ward, *Miniature Rooms* (Chicago, The Art Institute of Chicago), \$.35. This is a booklet of photographs showing the collection of rooms on exhibit during 1939 at the San Francisco World's Fair. Permanent exhibit of a previously made collection of rooms is in the Natural History Building, Chicago. This collection is exceptionally valuable because the designs for the rooms were carefully studied and faithful reproductions in miniature were made of historic rooms and furnishings.

# 6

## MANAGEMENT WITHIN THE HOUSE

HOUSEHOLD management is the most extensive of small businesses, and the word *management* implies control. Control may be based upon an intelligent studying of situations and practised for the common good. Good management should result in the development of conditions and systems that facilitate working and living together. The specific conditions and aims in various homes differ, but some are common to both school laboratories and household groups. This chapter will help you to see these common aims and suggest some devices and procedures that you may be able to adapt either to your laboratory or home situation. To operate best, all members of a group need to be familiar with the conditions and participate intelligently in systems designed for the group. Every one can thus be self-directing but definitely an important member of the group. The problem is to analyze situations and develop working plans that fit them.

1. Have you ever successfully managed a game, a party, or the preparation of a meal? What kind of plans did you make? What means did you use for getting the people involved to understand what part they played?
2. In what respects does housekeeping in the high-school laboratory differ from the housekeeping done by the two employed girls described in the chapter?
3. What is the importance of cleanliness to housekeeping? What is the importance of order to housekeeping? When may a sanitarily clean towel not be esthetic in its appearance?
4. What is the relationship of a single housekeeping job to the problem of management?

## 5. How does housekeeping differ from home management?

**Who are home-makers?** When the 1930 census was taken 28,405,294 persons were counted as home-makers. A home-maker was defined as "that woman member of the family who was responsible for the care of the home and the family." In addition to individual homes, each with a home-maker, there were over a million families not so provided, living in hotels, institutions, boarding-houses, construction camps, and so on. Thus it is evident that homes are the most numerous of small businesses, and home-making the most extensive of occupations.

Household management is almost as complex as it is wide of practice, for homes are little standardized. The management of one may look very different from that of another. Hence it is easier to think together about laboratory management first.

**Housekeeping in the school laboratory.** A certain amount of housekeeping is needed in every laboratory. There are dishes to be washed, silver to be polished, linens to be laundered and put away, towels to be washed and hung up at the close of every laboratory period, waste-paper baskets to be emptied, floors to be swept, stove tops to be washed, ovens to be cleaned, dish cupboards to be left in order, shelf papers to be changed, or covered shelves to be washed, blackboards to be erased, and so on. In order to have a clean laboratory in which to work each class must contribute by leaving it in good condition for the next.

To finish within the laboratory period, it is necessary to divide the work. This means of course that every member must know the meaning of acceptable standards and how to do each of the several jobs. Naturally it helps to discuss why each job is necessary and to agree upon how it should be done. This is a part of learning.

Some schools have food and clothing laboratories in which to learn housekeeping; others have a dining-room in addition and still others have an entire apartment or a separate cottage. Obviously the general set-up of the school department will

have an influence upon the amount of work required and the way it shall be done, but whether the school is in Maine or Southern California, Florida or Oregon, certain aims will be common to all.



Fig. 1. Adjusting furniture for working.

- A. Difference in height of two high-school girls. Sink at correct height for shorter causes back strain for taller.
- B. Worktable too high for short girl.
- C. Substantial wooden box on casters to slip under work table when not in use.

**Cleanliness.** Cleanliness is of first importance. The dishes, pans, table tops, garbage pails, refrigerator shelves, and so on need to be washed entirely free of all foods to prevent the growth of bacteria, and the encouragement of insects and rodents. All foods should be kept in clean, firm containers to protect them from bacteria and grit of settling dust; from flies,

mosquitoes, ants, cockroaches, and other insects, as well as mice and rats that often can and do get into school buildings as well as homes. Covered stone or granite jars, glass jars with tops, ventilated metal cans with tight-fitting tops, screen-sided boxes for potatoes or other raw vegetables that require ventilation, ice-boxes and refrigerators are familiar containers. Not only is cleanliness of first consideration to housekeeping in all food laboratories but also to home kitchens, storerooms, and pantries.

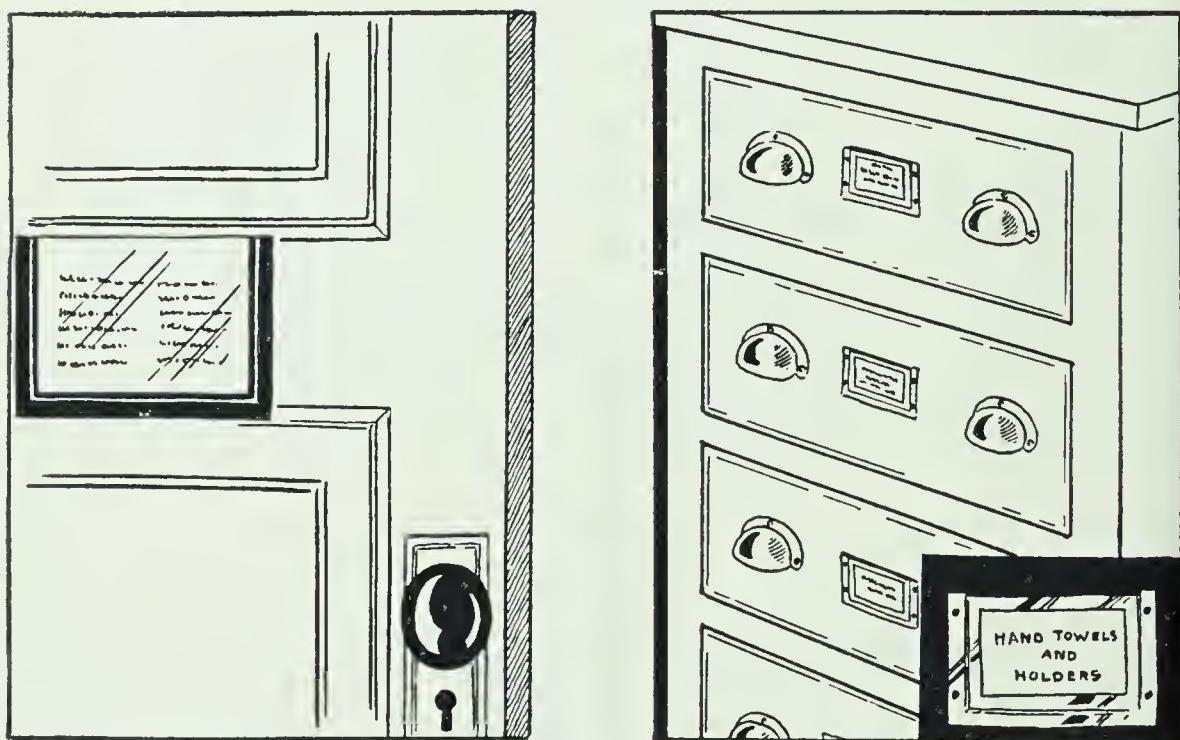


Fig. 2. Order through labeling.

Wooden doors may have the top of an inexpensive picture frame removed and the sides nailed to the inside of the door. This provides a frame with glass and permits easy changing of lists. On the right are shown drawers with contents clearly marked.

**Order.** In addition to cleanliness, housekeeping establishes order and facilitates work among several people using the same equipment. Even for one person order is a saving of time since it prevents waste of hunting for a misplaced article. To establish order definite places need to exist for cooking utensils, chairs, tables, towel racks, and so on, in food laboratories, and for tables, machines, chairs, ironing boards, irons,

and so forth, in clothing laboratories. One needs to look over and take an inventory of all equipment and furnishings, then consider places for each item, and plan when and how they are to be used. For example, short grade pupils as well as tall high-school girls often use the same towel rods. The question at once arises, are these rods at a height that both can use.

Labeling also helps to keep order among people using the same equipment and supplies. On the inside of a china cupboard door one can paste a list of all dishes to be kept in it. Rubber cement or strips of adhesive tape around the edge of the list are useful in making paper stick to glass doors. Spaces on shelves for plates, cups, glasses, and so on, may be indicated with labels. Tough paper fastened directly to the shelf with rubber cement, adhesive tape or metal label-holders serve also. Drawers, too, need labeling that one can know where to look for and return articles.

Glass jars used for nuts, dried prunes, raisins, and so on, obviously need no labeling, but even glass jars need bold labels when used for soda, baking powder, powdered sugar, cornstarch, or flour. Conspicuous labels are also needed for such materials as kerosene, sal soda, and lye, all of which are dangerous.

**Need for working familiarity.** It is easy to establish order when there is a place for everything if each person is given time to learn the places and why they were established. If changes are necessary, it is, of course, just as important that every one should know what changes are proposed and why. Members of classes need to take an interest in what changes

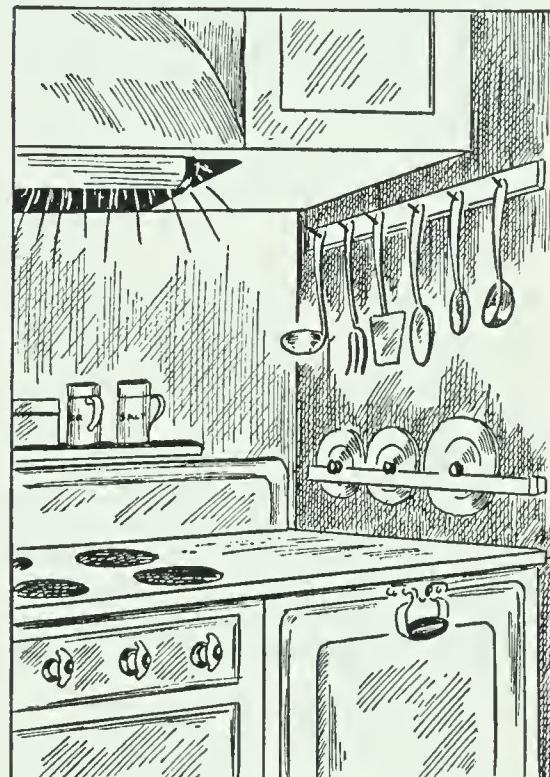


Fig. 3. Keep equipment where most used.

shall be made and how, if they are to coöperate intelligently in the use of the laboratory.

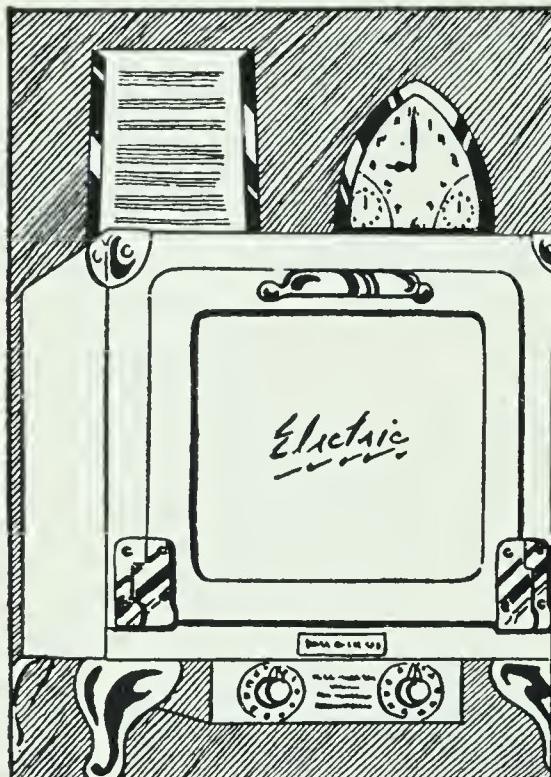
**Directions.** Another problem common to laboratory management and to individual households is that of specific directions for the use of equipment. Never before have there been so many gadgets and household machines as now. No set of directions could be made to cover all. In homes the person who

does the buying usually knows how or learns to use the article when purchased. Many other persons may need to use it; hence specific directions are needed. Wall attached frames with glass covers, like that for the china cupboard, placed near furnaces, refrigerators, water filters and softeners, electric washing machines, mangles, vacuum cleaners, electric mixers, and so on, aid every one using the equipment. Step-by-step directions for operating the machine and instructions for cleaning and oiling it, may be needed. Try writing step-by-step directions for operating and oiling a specific sewing machine or a vacuum cleaner, and

Fig. 4. Directions for operating an electric oven clock are slipped behind the glass of the metal frame shown on top of oven.

assume these directions are for a person who has never seen either. Choose also a piece of equipment that every one must use, such as a gas oven, and write step-by-step directions for it.

Specific directions of another type are needed in laboratories. They are guides for performing duties in ways best suited to the particular laboratory. For example, your laboratory may need directions for the daily or weekly care of the sink, or guides for discharging the duties of a general housekeeper. Often these are written on cards and kept in a file, or they



may be bound into a note-book, labeled, and placed on the shelves with other books and bulletins.

**Care and filing.** Because United States and state bulletins have paper covers that curl and tear, note-book covers or bulletin cases are useful. Bulletin boards, either single or of the leaf type, also serve to keep clippings of immediate interest, pictures, diagrams, or models. In many laboratories bulletin boards are the source of much information to which pupils as well as teachers contribute.

**Esthetic qualities.** Housekeeping is not only important to provide cleanliness, which is an aid to health; and order, which is a means of facilitating group use of equipment because it helps to prevent friction among people, but housekeeping is esthetically important also. It is a pleasure to see clean, orderly laboratories with fresh, crisp curtains; clean enameled dish shelves; polished utensils, stoves, and table silver; glistening mirrors; sparkling water glasses; and so on.

In an experiment exactly the same meal was prepared and served on three successive days to the same persons. On the first day the food was not only tasty but it was served on spotless linen, with daintily decorated dishes, well-polished silver, and sparkling glasses. The food was relished, and accurate testing afterward showed that there was a healthy flow of digestive juices. The next day without warning the same menu, cooked under the same conditions was served on linens and dishes that had been smudged with pure carbon. A little of the pure carbon was also sprinkled over the food. Testing showed that the flow of digestive juices was not as good as the day before. What the guests saw, though harmless, spoiled their appetite.

On the third day the same delicious food was served where the smell of chemically pure skatol and indole, which are odiferous compounds of feces, was strong. Again the flow of digestive juices was inhibited. Though in neither case was a harmful substance introduced into the food, the suggestion both to the eyes and nose was such as to spoil the appetite. These guests were unable to enjoy their food when their

esthetic sense was offended through what they saw and smelled.

It is important to remember also how impossible it is to determine health or safety by esthetic qualities alone. The bacteria responsible for typhoid or the amoebae that produce amoebic dysentery can be present in sparkling, clear water, whereas sterilized but unfiltered water can be murky though harmless. So too, snowy white linens sneezed upon by tubercular patients may be dangerous, and well-sterilized though gray linens can be harmless. Valuable as appearances are one needs more than good appearance when judging sanitation.

Functionally designed bowls with graceful shapes; paring knives designed with easy curves that fit the hand; smooth, unchipped, and uncracked enamel; well-glazed earthen and china dishes; cheerfully designed curtains; clean, neatly hung towels; orderly arranged furniture—all contribute to the esthetic appearance of a laboratory. See illustrations of tables, page 302.

**Management.** If you have planned, marketed for, prepared, and served a meal, and then washed the dishes, you have had a chance to see how management operates. Your menu, in addition to providing the needed foods for health and the enjoyment of food, should be planned also in relation to market conditions, capacity of stove, utensils, and serving dishes. Likewise good management means that in addition to being able to follow a recipe one must gauge the length of time needed for cooking or otherwise preparing each item of the menu in order that the hot foods may be served hot and the cold foods cold at the time needed. Careful planning and orderly procedures of work have also shown laboratory pupils that unnecessary dirtying of dishes means unnecessary dish-washing. It is common experience that both young and older people will use extra dishes when they are learning how to cook because they must first be concerned with getting a good product. Market condition and stove capacity may be neglected. Later when they are familiar with different processes, attention can be given to management problems tha-

involve planning to use the foods that are plentiful in the market, arranging the order of work to make cooking "come out even," economizing time, and serving in order to give pleasure in eating. Management calls for much skill in addition to good planning. To have skill requires practice.

Management of all the processes of a home is more complicated than just planning, preparing, and serving a meal. Listing all the kinds of work that need to be done in a laboratory or home, deciding on how they shall be done, and making schedules in which jobs are assigned either on a daily or weekly basis to different class members, and lastly checking at the close of the hour, are all responsibilities that pupils commonly take over in a laboratory. They are opportunities to learn by practice how to do the various housekeeping jobs and to see what goes into housekeeping in a general way. Laboratory practice can serve boys as well as girls, particularly those boys who plan to be carpenters, plumbers, painters, architects, inventors of household equipment, manufacturers, and so on, by giving clearer insight into working conditions and the relationship of one job to another.

When electric refrigerators were first manufactured, they had no automatic lights at the back, and one could not pull the shelves out easily as shallow desk drawers. In discussing a particular make of refrigerator the purchaser talked with the sales manager about the possibility of lighting the inside and having flat rod or perforated metal shelves like shallow trays or drawers that could be pulled. Containers thus would not tip when the shelves were pulled and food would be almost as easy to take from the back as the front of the shelves. She also wanted mechanical stirring of ice cream while freezing. "It can't be done. I say it can't be done," was the only reply at the time. Less than a year later this company had inside lights and sliding trays, each a simple change to make, and now used as selling points for this as well as other machines.

Housekeeping jobs are a basic part of household management but like filling the cans in a pea factory any one job is but a part of the whole problem of management. Management

calls for knowing what is essential and how to plan to get it.

Household management, like manufacturing, store management, and so on, is a business, but a business that is different to the extent that its aims are different. In a productive business such as manufacturing the aim is to create and sell goods for a profit. The amount of profit, the condition of the plant, and the good reputation of the business are among the measures of its success.

Efficient household management is different in that the house is managed for the good health, comfort, training, and pleasure of each and every member of the group. By and large the house is not a money-making institution as is the factory or store but rather a money, goods, and service-using institution. One measures the success of household management in terms of health, capabilities, and good-citizenship qualities of the several members. Questions such as: Is good health rather than illness the rule? Have the several members learned to adjust or get along with each other? Does each understand the physical and social needs of the others? Have they developed common interests and can they enjoy each other? Are they intelligent and honest enough with each other to be trusted with freedom? Do they know how to make the house serve the family without abuse or destruction of it? By answers to these and other similar questions success is measured, for the household is an institution of persons living intimately together in dwellings, and the important questions concern how well they live together. For most homes money earned elsewhere is used to buy furnishings, equipment, or labor. Good management will make these materials and human services further an art of living.

The physical structure of the house and the routinizing of work are important to the extent that they make for human well-being. As hospitals or schools are primarily service rendering, rather than money-making institutions, so too the good home is a service institution. Good management in a school creates an environment for learning how to live constructively. Good management in a hospital provides a plac-

in which to give care to the sick. As a hospital must be operated on a twenty-four-hour a day 365-day of the year schedule with plans for developments in future years, so too the home as an institution is on a twenty-four-hour per day, 365-day per year basis, and must have plans for years in advance, for it is a human institution. Children once born must have care for many years. Care of dependent adults and aged persons is also the responsibility of many homes.

It has been said that most homes are managed on an emotional basis, meaning that people get along with each other in a haphazard manner, petting and scolding rather than discussing and planning. There is no question that serious quarrels other than those that reach newspapers, courts, or social workers go on in homes. A few people prefer to manage by quarreling. Like gamblers they take a chance on winning and are willing to resort to any means to gain their end. In the long run, however, they too lose, for even though a point may be gained, friendship, confidence, and good feeling are likely to be lost. Bickering and quarreling is not like friendly differences of opinion or divergent tastes which often make persons better friends if each is generous and tolerant, or has a sense of humor.

In contrast there is the intelligent and kindly group where every one appears to be free to do as he or she pleases but where it is very evident that no one would please to do anything harmful or highly annoying to any one else. From babyhood on, each person is taught to be as independent as he is capable of being and to have respect for other members of the family and persons in general. They have been taught to have respect for others if for no better reason than that of merely being human. This condition requires understanding and the kindest of feeling among persons. The family in which each of the healthy and capable members voluntarily relinquished his and her claim to the family inheritance that the incapable imbecile member might be well cared for throughout life is a striking illustration. As a result of living together in the home and discussing the problem they came to

realize that like any chronic illness constant care would be needed. Each realized that he or she might have been the dependent member of the family and was willing to help provide the care they should have wanted for themselves if the circumstances had been different.

**Adjustments.** By referring to the figures taken from the 1930 census (see page 147) you see that one person has been regarded as a family in making this count. So far as the house is concerned, management for the person who lives alone is a question of personal choice as long as he does not interfere with neighbors. There is no need for adjustment to the tastes and habits of other persons. The standard of cleanliness or order may be extremely high or low.

Though in the long run every one, whether an only child or one of a big family, must live his or her own life, the circumstances of living call for varying types of adjustment. The person who lives alone adjusts only to the physical conditions of the building. Management is a problem of making what one wishes and is able of the house or apartment in accordance with one's own taste. The addition of another person means controlling the physical conditions of the house or apartment according to the needs, abilities, and tastes of two persons rather than one.

The next census group (see page 147) of two-person families have personal adjustment problems. If the two persons do not agree about how they wish to live and keep house, problems must be talked over and agreed upon, or friction is likely to result. The case of two friendly employed girls with similar tastes and standards of housekeeping shows one comparatively simple type of adjustment. They planned to do their own housekeeping in a small apartment under a fair and highly democratic plan.

Each girl was employed in much the same way with the same hours so they divided their work, making one at a time responsible for planning the meals, marketing, preparing the food, serving it, putting left-over food away, washing dishes doing the daily straightening of the kitchen, and rendering an

account at the end of the week to the other who was then to take the food job over in exchange for the cleaning job.

The person responsible for the cleaning made the beds daily and once a week changed them. She took off all the bedding, turned the mattress, and made the beds with fresh sheets and pillow cases, as a part of the general cleaning. The general cleaning included scrubbing the bathroom and kitchen floors, washing the mirrors, picture glass, enamel of the toilet water box, bath tub and lavatory, as well as the water splashed painted walls. Clean towels and wash cloths were exchanged for soiled once during the week. It was also a part of the cleaning job to replace dirty curtains with clean when needed, pick up papers and magazines, polish metal such as faucets, table silver, and so forth. Since the bedding, towels and table linen were sent to a commercial laundry, it was also her work to count the pieces of soiled laundry, make the slip, put the laundry bag where it could be picked up, check the laundry slip to see that the pieces were returned in good condition and pay the laundry man. Paying the gas, electric, and telephone bills also belonged to this job and fell to the lot of the one who had it at the end of the month. The newspaper was paid for by the week and household items such as new dish towels or table linen at the time purchased. The slips for these items were collected until the end of the month, for these girls were interested to know how much it was costing to maintain their apartment.

At the end of the month, during which the cook twice forgot and left the gas oven burning all day, the gas bill was higher. Recognizing that she was responsible because of carelessness she paid the difference between this bill and the average of the previous bills.

But not all their management problems showed up so clearly in the bills. Many came to light only after study of different experiences. They had been keeping house only two or three months when tiny holes about the size of shot appeared in their new sheets, towels, and table linen. Several pieces were so badly spoiled that they tore at the edges of the holes. The

girls were sure defective linens had been sold to them. When, however, they took a sheet back to the store from which it had been purchased, they were told that the laundry was responsible. Evidently the bleach that had been used was not thoroughly dissolved and mixed with water before the sheets and table linen were put into the wash. Where the concentrated undissolved bleach came in contact with the fabric it rotted the fibers. Since the holes were appearing in everything



Fig. 5. Laundry at fault.

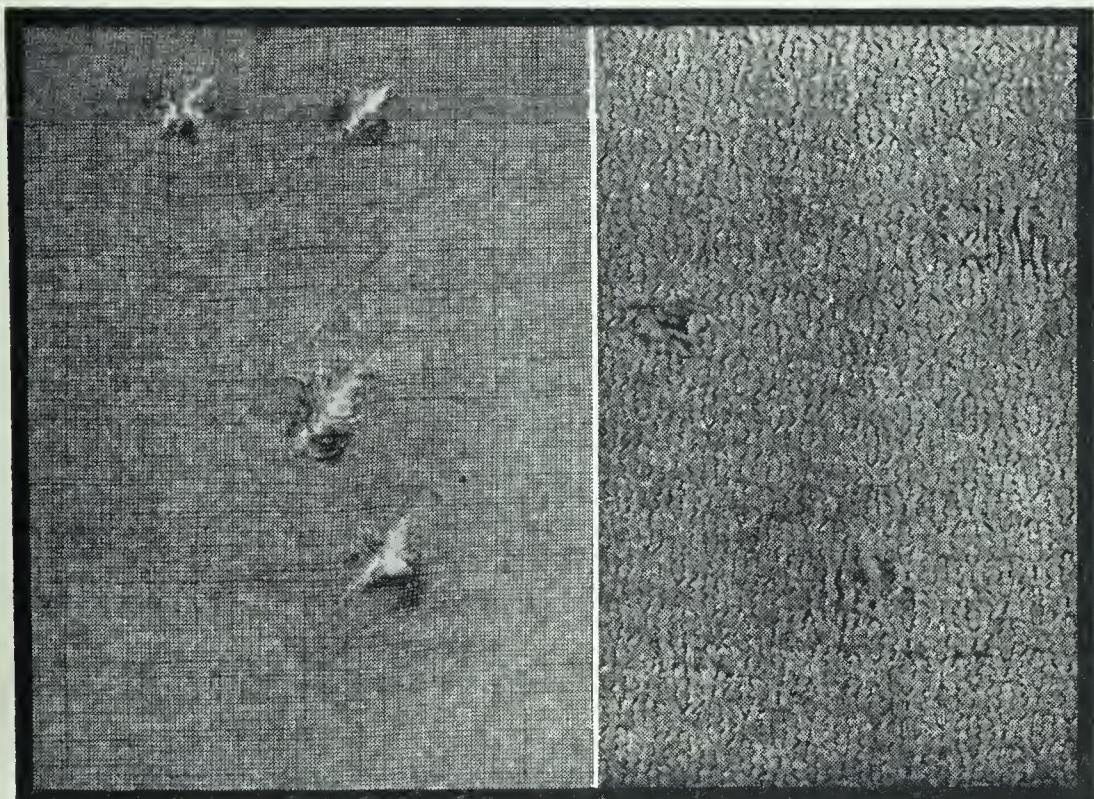
A bath mat in which fibers had been weakened with several washings and finally torn in laundry machinery.

they sent to this laundry and the sheets and table linens had been bought from different stores, it was more likely that the laundry rather than the store was at fault.

At once these girls saw that their laundry costs include replacement as well as the weekly charge for washing and mangleing. Unless the laundry with whom they had been doing business could assure them of better work, it would pay to take time to find another one. From this point on household management meant more than just dividing the housekeeping work. Studying their bills in relation to their own carelessness

habits as well as the bad practices of the commercial laundry was important in addition to paying their bills and keeping a record.

As time went on, they came to see more and more the relationship of commercial services to their living. They found that some kinds of work were so completely done for them that little was needed other than to use well what they bought.



*Courtesy of the Department of Research and Textiles, American Institute of Laundering.*

Fig. 6. Careless personal habits may cause unnecessary wear of textiles.

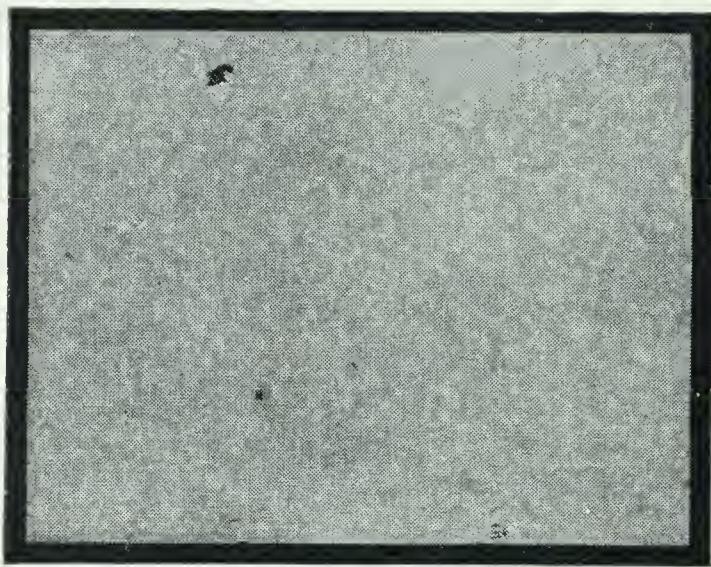
Left, a table cloth cut by knife. Right, razor cuts in a huck towel.

They could rely upon some places of business to tell them as truthfully as they knew about the products they sold, others tried always to make articles of poor quality look like and sell for the price of good.

After living for a few months in their apartment they realized that the kitchen was very awkwardly arranged, and that there was not enough radiation in their living-room. On cold Sundays when they were home it was necessary to run the gas oven all day to warm the living-room sufficiently for

sitting. They had taken a first-floor apartment that they discovered later was over the coal bin. Each time coal was delivered their apartment was covered with a thin layer of coal dust. Their curtains seemed to collect an especially generous amount and hence needed more laundering because of their location in the building. This was a costly nuisance. Also the bathroom opened directly into the little entry rather than

to their bedroom. This kind of awkward planning they agreed to avoid if ever they moved to a different apartment.



*Courtesy of the Department of Research and Textiles, American Institute of Laundering.*

**Fig. 7. Sharp bed spring ends may cause torn sheets.**

A firm muslin cover should be tied or pinned over such springs before the mattress is put on the bed. Holes over the entire sheet and in all other articles sent to a laundry might indicate undissolved bleach.

peculiar. Many people see their selection errors only after they have tried to live with them.

**Adjustment of plans.** Their original plan included provision for inviting guests home to dinner on Tuesday nights or over the week-end. Tuesday was the easiest day of the week where both were employed, and they were always at liberty to leave a little earlier on Tuesday afternoon if they were willing to stay a little later on Mondays. This worked beautifully until a very good friend suddenly appeared from out of town on Wednesday, causing an adjustment of their plan. There wa

Looking back over their experience of taking this apartment both realized that such faults were glaring. Only their excitement of selecting a first apartment could have blinded them. However, conversation with friends who had taken apartments showed that in this respect they were not errors only after they

the problem of deciding whether to go out to eat, buy more of the food they had on hand for themselves, or completely change the menu.

**Thoughtfulness a courtesy.** Later they discovered a need for the courtesy of letting the person who was cook know when the other was unavoidably detained or suddenly decided to eat elsewhere. When one had been cook for a week, it was easy to understand the importance of this. Occasionally the one who was not cook found it convenient to have her dinner saved.

**Flexibility.** Plans for flexibility and quick adjustment are perhaps as important to household management as plans for routinizing jobs. Only as one has a situation clearly in mind are changes easy. Interruptions of many kinds come in housekeeping. Telephone and door-bell calls, answering children's needs or demands, unexpected guests and accidents are familiar interruptions.

**Experience as an aid to learning.** In the case of housekeeping and managing as carried on by the two girls who shared the costs equally and alternated the work, experience soon showed each the process and some of the problems of household management for two persons in a small city apartment.

Households in which the home-maker does not help to earn the living and the person who does earn it takes no part in the housekeeping, sometimes produce people who cannot see or appreciate the problems of the other. Also school children are often prevented from learning about housekeeping by well-meaning parents. A mother in discussing her daughter said, "I never ask her to do anything about the house for her school work takes all of her time"; to which another mother replied, "I think you cheat her. Learning to know what must go on to keep her home running is as much a matter of education as what is taught in school."

**Situations.** In the case of the employed girls the situation is one that comes near to being an equal division of work, responsibility, and independence; and one in which there can be equal opportunity for understanding the problems in-

volved in operating this particular small household. The means of earning a living were so similar for these two girls that they could understand each other. Also they had been similarly raised with tastes enough alike to agree in most respects. They were sincere friends with no desire to take advantage of the other; there was no rivalry between them, and they were really interested in learning what it meant to plan for and manage their own housing.

Comparatively few situations of real life are as equally balanced. The money income from which food, clothing, shelter, health, recreation, and other bills must be paid is earned by family members who do not have time and often would not be inclined to assume full responsibility for the household work and management job. Again many women find themselves in managerial work because of romance rather than specific training. They have never seen the unpleasant as well as the pleasant aspects of housekeeping and household management. The person who earns the income and believes that money is the only measure of success easily can feel superior to the person who attempts to use it. The problems of buying what the group most needs and wishes with the family income and from the market at hand seem trivial. Difference of opinion, as to what the group really needs or who is justified in satisfying some whim with a large proportion of the family money, follows. Serious disagreements can and do result in these unbalanced situations unless individuals put forth a serious effort to understand and help rather than criticize others.

It is common knowledge that many children are in a difficult situation for learning. They are handicapped in really comprehending the problems of their parents or other persons who assume all the responsibility for both earning and purchasing the food, clothing, shelter, and other items of the budget. Frequently sons and daughters are highly critical without being able to offer constructive suggestions mainly because they have never participated in the work. They have been guests in their own homes.

**Organization of work for learning.** When people participate in work for the sake of learning, it is important that it should be so organized and conducted as to give every one an equal opportunity, if possible. In a certain cottage of a private school where a group of twelve girls lived together and did a large portion of their own work, there was a reputation for such good organization that efficiency, friendliness, a minimum of friction, and time for recreation together could always be counted upon.

When school opened in the autumn, they had a general get-together meeting for the purpose of discussing the kinds of work that would need to be done each day and week if they were to be able to live together. They discussed the hour at which it would be necessary to have breakfast in order to get to classes on time and whether they should have exactly the same dinner hour as that of other cottages. They scheduled certain parties and special dinners they planned with girls in other cottages and worked out a system whereby individuals might feel free to bring personal guests home from time to time. They talked about how much cleaning and what kinds would be necessary to keep the living-rooms in order that no one of them would be ashamed to bring a guest home; what kind of menus they preferred with the money they had to spend for food; and how they would serve at the table. The girls who had lived in the cottage during previous years had plenty of ideas about what worked well and what did not, and the new girls soon felt at liberty to ask questions as to why another plan might not work as well or better. It was much the same kind of meeting that is familiar in foods classes when work for the care of the laboratory is being organized. The big difference was that in the cottage it was necessary to work out a plan that would serve for living intimately together day after day for many months.

They elected a president to call and preside at meetings, a secretary to keep records of meetings and write letters representing the group, a treasurer to collect dues and pay bills. These officers were responsible for the duties that commonly

fall to officers of a club, but in addition it was they who administered the plan that the group worked out for doing their own work. After listing the essential jobs all members of the group drew lots to see where each person would begin on the schedule. They agreed that at the end of each week they would shift jobs, the person who had begun with number one would proceed to number two and so on. Each week there was a change so that within a few weeks every one had had

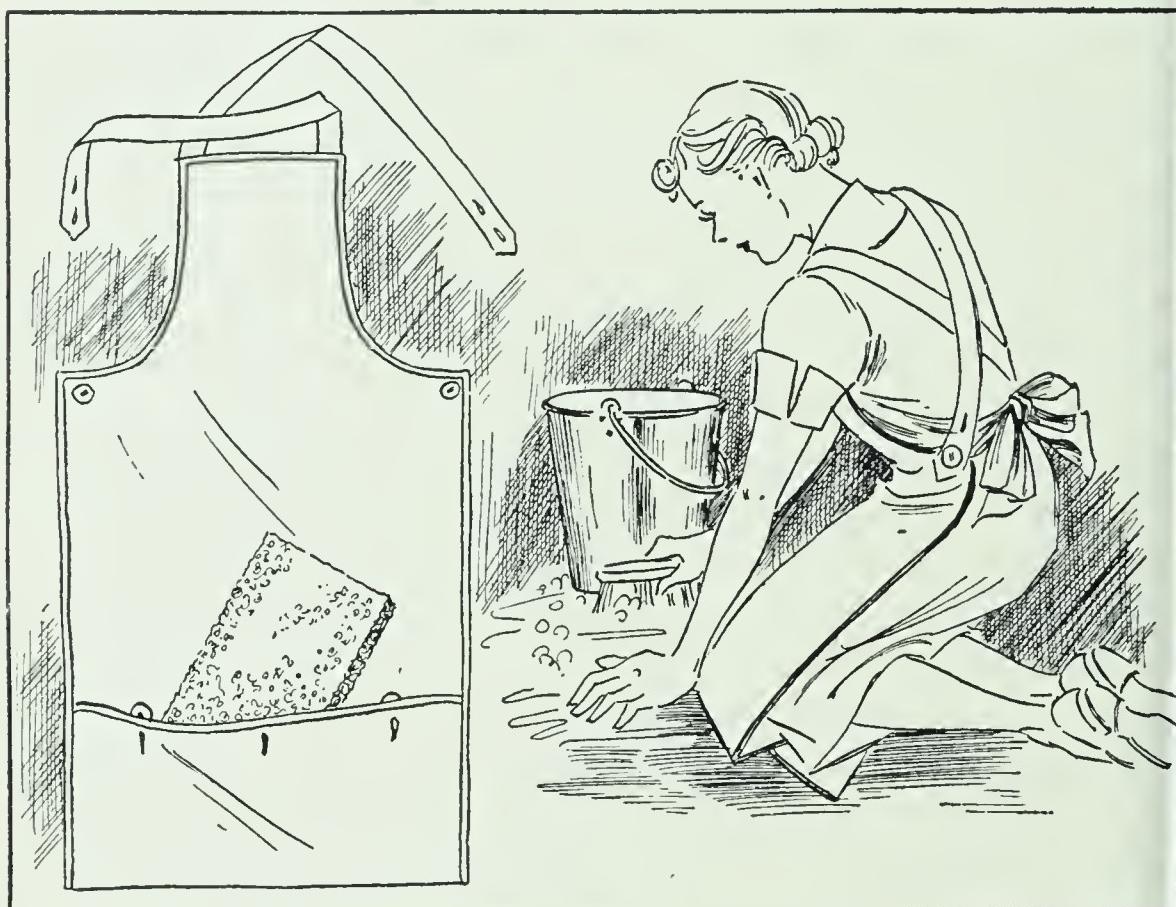


Fig. 8. A denim apron with pocket for rubber kneeling pad. Long straps and extra buttonholes make it adjustable to persons of different heights.

some experience at each type of work. Then they were read for the president to call another meeting to talk about making changes in directions for certain jobs or dividing one job that took too much time and adding it to another that was shorter.

By this time they had had an opportunity to understand that the order of procedure in doing work makes it either easier or harder. Through experience also they knew what

machines, equipment, or supplies to collect for a job. For example, one girl who cleaned the bathrooms did her work well but in far less time than others because she organized it. She brought the cleaning kit and scrub pail when she came to do the job, and worked in orderly fashion. There was no running back and forth to the supply cupboard because she had awkwardly forgotten a dust cloth or bottle of polish.

Once an electric stove was installed in the cottage and this called for much discussion about operating the switches, setting the temperature control, and using the clock to switch the heat on or off. No sooner had the group learned than a new girl came to live in this cottage, and it was necessary to go through the explanation with her. This time it was less interesting than when they were all learning. Furthermore some girls forgot from time to time so they decided to write specific directions and keep them in a metal frame on top of the oven.

**Family assignment more permanent.** As a rule individual family analysis, listing, and assigning of responsibilities are not as clear-cut as in this situation. Parents carry certain responsibilities from year to year and children either never know that there are these responsibilities to assume, or feel that only parents should carry them. Sudden illness often shifts the set-up so that the jobs regularly carried by one person must be transferred to another or deliberately divided and given to two or more persons. The death of parents sometimes throws their work upon grandparents, other relatives, or the state.

**Work on sex basis.** In families work may be planned to teach individuals how to do all types of household jobs, or it may be planned on a sex basis, boys being made responsible for taking care of a furnace or yard and girls for cooking, washing dishes, and cleaning the house. Permanent division of work has certain disadvantages from the point of view of learning, for it prevents individuals from getting the variety of first-hand experiences needed to help understand the importance and relationship of each job to the whole organization. As time goes on, one thinks in terms of what work is proper for girls or boys rather than what is necessary for the

group in order that a maximum of health, comfort, independence, and coöperation may result. Where household employees do the housework, boys who plan to be architects or support a home of their own as well as girls who plan to be housewives miss the experiences that help to show them the meaning and extensiveness of household management. It is

often harder also for them to see the extent to which better building could be used to create pleasant and efficient living conditions.

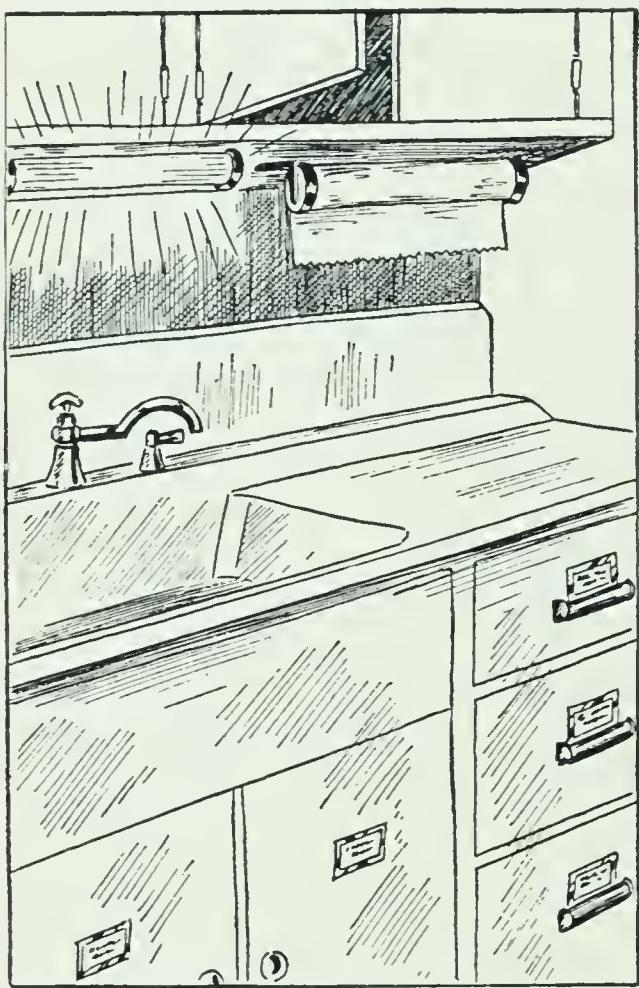


Fig. 9. Make essential work easier by good organization and lighting of work areas.

experience. By discussing what provisions for housing they wanted and the experience of selecting their apartment they not only became aware of what they would need, but also of what they could get. Being very good friends, they were anxious to be thoughtful and fair in their dealings. One could understand why it was a courtesy to let the other know when she changed her plans about coming home to dinner, and the one whose careless

**Analysis of job.** The essential as well as the non-essential work of individual homes differs; yet the general outline and description of jobs, pages 233-255, suggest those common to most homes. How much of cleaning, laundry work, cooking, and so on will be done in any one home varies according to individual situations.

The first of the foregoing illustrations shows housekeeping arrangements made by business girls where there were opportunities for learning through experience.

ness was responsible for wasting gas was in a position to understand and volunteer to make up the difference. Then too they were in a position where it was easy to see the relationship of an increased gas bill for heating the living-room because the steam radiator was not large enough, why the location of their apartment in the building was particularly dirty, how the awkwardness of the kitchen plan made them more work, and also why inefficiency at the commercial laundry was responsible for causing them to buy new linens before they would have been needed with the slower wear of good laundering.

Like the two employed girls, the group of twelve had a plan for equalizing responsibilities. They too could learn much about the needs of housekeeping and adjusting to each other. If one girl seriously neglected her responsibility, others were obliged to make it up for her. When one was ill or had a sudden invitation away and thus was unable to do her work, it was necessary for others to take it over. She was expected to repay the courtesy later by helping others. Each of these are specific household patterns that fit definite situations as garments of different size fit different people. Like the housekeeping pattern that you work out in your laboratory, it fits if you work it to fit.

But housekeeping patterns vary because of climate; occupation of the wage earner or earners; location of the home in an urban, suburban, village, hamlet, or farming community; and standards of the group. The following schedules of girls who live remote from each other illustrate some of these influences. Those who made replies about their schedules were chosen by teachers as representative. Theirs are the usual days for girls of their community living at home.

### SCHOOL-GIRLS' SCHEDULES

#### PUERTO RICO

*Ester*, who is sixteen years old, lives in the city of Caguas, where her father has a small dry-goods store. Ester attends the high school and is representative of the majority group in the city.

In her home there is electricity, running water, and a gasoline stove. That is, there is sufficient water for household purposes. The family washing is sent to the river to be washed. At times her mother employs a servant who receives board and lodging and two dollars a week, perhaps some discarded clothes. Beside Ester there is also an older sister and two younger brothers.

This is a schedule as kept for a week.

*Monday to Friday*

6:30	Rise
6:30— 7:00	Get ready for school
7:00— 7:15	Study
7:15— 7:30	Eat breakfast (bread and coffee)
7:30— 8:00	Go to school
8:00— 8:10	Home room
8:10— 9:00	English
9:00— 9:50	Algebra
9:50—10:40	Health and physical education
10:40—11:30	Spanish
12:00—12:30	Dinner
1:00— 1:50	General science
1:50— 3:30	Home economics
3:30— 4:30	Return home, change uniform, bathe, dress Wait in store so my father and aunt can go for coffee
5:30— 6:30	Supper
6:30— 7:00	Help my sister wash dishes, put away left overs, clean stove, sweep floor
7:00— 9:00	Study, practise music
9:00—10:00	Retire

*Saturday*

8:30	Rise
9:00— 9:30	Breakfast
9:30—10:30	Take piano lesson
11:00—11:30	Make the beds in the home
11:30—12:00	Sweep the bedroom of my sister and me. Put our clean laundry away
12:00—12:30	Talk with girl friends
1:00— 1:30	Take lunch
2:00— 4:30	Skate in the Plaza; walk in the country or once month a club meeting

4:30— 5:30 Any of the following—

- Take little brother for a walk
- Go to the bakery for bread
- Set the table
- Iron uniform
- Wash pair of stockings

5:30— 6:30 Dinner

6:30— 7:00 Bathe and dress

7:00— 9:00 Spend evening in the Plaza with my friends

### *Sunday*

7:30 Rise

8:30— 9:30 Divine service

9:30—11:00 Outside of church with my friends

11:00—12:00 Entertain baby brother and cousin

12:00— 1:30 Dinner

1:30— 4:30 Movies (five cents on Sundays)

5:30— 6:30 Supper

6:30— 7:00 Bathe, dress

7:00— 8:00 In the Plaza with my friends

8:00— 9:00 Prepare Monday's lessons

*Francisca*, who is thirteen, lives on a sugar plantation where her father is employed. Her two older brothers also work as cane-cutters. No women work with the sugar cane—neither in the fields nor the Central. Sugar-cane season begins in January and stops around June. During this time Francisca's father earns \$1.25 per day and her brothers \$1.00 each. Out of cane season the father raises vegetables in a little garden of his own and sells them to the people in the town. At times Francisca's older sister will take the vegetables to the town to sell.

There is no electric light in the home. Water is obtained from the river where the weekly wash is also done. The stove at this home as in all country homes and in many of the homes of the town is made of cement. In openings in the cement charcoal is placed and by this means food is cooked. Ovens are rarely found.

### *Monday to Friday*

6:00— 6:30 Dress, wash self in the river

6:30— 6:45 Breakfast (coffee and bread), always the same

6:45— 7:30 Come to school

7:30—11:45	In school
12:00—12:30	Take lunch at uncle's home (rice and beans)
12:30—12:45	Return to school
12:45— 3:45	In school
4:00— 4:30	Go home by means of public car
4:30— 5:30	Help at home, for example— Iron little sister's dresses Wash dishes, sweep floor Wash brothers' and father's socks Fix the beans for rice and beans Help brother to pick vegetables to be sold next day Prepare clean uniform for myself Mend my underwear and stockings
5:30— 6:00	Supper, usually soup and bread
6:00— 6:30	Play outdoors, take care of little nephew
6:30— 8:00	Prepare next day's lessons
9:00	Retire

*Saturday*

7:00— 7:30	Dress
7:30— 7:45	Breakfast
7:45— 9:30	Go to the river and help my mother and older sister to do the family wash
9:30—10:30	Help my mother to cook—fix stove, prepare the beans
11:00—11:30	Take lunch
11:30—12:30	Play with little sister
12:30— 1:30	Wash the dishes, sweep the floor, bath little sister
1:30— 2:30	Take siesta
2:30— 3:30	Prepare dress to wear to church on Sunday, study lessons for Monday
3:30— 4:30	Help mother: set table, prepare cabbage for salad gather vegetables—jautia (a kind of potato)
4:30— 5:00	Take supper
5:00— 5:30	Wash and dry the dishes
6:00— 7:00	Play games outside with brothers and sisters
7:00— 7:30	Read the newspaper— <i>El Mundo, Imparcial</i>
7:30	Go to bed.

## MINNESOTA

Mary is a junior in high school sixteen years old. The family lives on a rented farm. Her mother does own housekeeping, does not work in the fields but does milk in summer and takes care of dairy.

*Monday*

7:00 Rise  
 7:00— 7:30 Dress  
 7:30— 8:00 Fix my lunch and eat breakfast  
 8:00— 8:15 Get books ready, and watch for school bus  
 8:15 Leave for school

---

5:00 Arrive home  
 5:00— 5:30 Change clothes and read newspaper  
 5:30— 6:30 Iron the day's washing  
 6:30— 7:00 Eat and help do dishes  
 7:00— 9:00 Study  
 9:00—10:00 Listen to radio and prepare my clothes for the next day, such as mending stockings, etc.  
 10:00 Retire

*Saturday*

8:00 Rise  
 8:00— 8:45 Dress and breakfast  
 8:45— 9:15 Do dishes  
 9:15—10:30 Help with Saturday cleaning, such as mopping and sweeping floors, dusting, washing woodwork, etc.  
 10:30—11:00 Wash personal clothes  
 11:00—12:30 Help prepare dinner and eat  
 12:30— 1:00 Do dishes  
 1:00— 1:30 Finger wave my mother's hair  
 1:30— 2:00 Read the paper or letters  
 2:00— 3:30 Wash my hair, bathe  
 3:30— 5:00 Polish shoes, press dresses, skirts, blouses, etc., for the next week's wearing.  
 5:00— 6:00 Prepare supper and eat  
 6:00— 6:30 Wash dishes  
 6:30— 7:00 Dress to go out  
 7:30—11:30 Attend basketball tournament in neighboring town, or go to town with my parents

. . . . .

*Anne* is eighteen and a senior in high school. Family lives in house owned by father in town. Her mother does not work in a factory but does all her own housework. One brother and two sisters work out.

*Monday*

7:00 Rise  
 7:00— 7:30 Dress

7:30— 7:45 Eat breakfast  
 7:45 Leave for Mass

12:00 Arrive home, get my mail  
 12:00—12:30 Eat dinner  
 12:30—12:45 Stack dishes  
 12:45 Leave for school

4:45 Arrive home  
 4:45— 5:00 Change clothes  
 5:00— 6:00 Do some ironing  
 6:00— 6:30 Eat supper  
 6:30— 7:00 Help do dishes  
 7:00— 9:30 Study, answer mail  
 9:30—10:00 Read newspaper  
 10:00 Retire

*Saturday*

8:30 Rise  
 8:30— 8:45 Dress  
 8:45— 8:50 Eat breakfast  
 8:50—11:00 Help with Saturday work—making beds and dusting and cleaning in bedrooms. Wash up bathroom, stairs, and hall. Clean dining-room and help scrub kitchen floor  
 11:30—12:00 Help with dinner  
 12:00—12:30 Eat dinner  
 12:30— 1:00 Do dishes  
 1:30— 2:00 Wash personal things  
 2:00— 3:00 Wash hair and bathe  
 3:00— 4:30 Mend and press clothing  
 4:30— 5:30 Arrange my hair and nails  
 5:30— 6:00 Help with supper  
 6:00— 6:30 Eat supper  
 6:30— 7:00 Wash dishes  
 7:00—10:00 Listen to the radio and read magazines  
 10:00 Retire

TEXAS

*Margaret C.*, sixteen years old, six in the family.

*Monday through Friday*

7:00 Make beds and help with preparation of breakfast

8:15 Go to school

4:10 Arrive from school, works in father's grocery store

7:30 Study

9:30 Retire

*Saturday*

8:00 Goes to work

P.M.

9:00 Comes home from work

10:00 Retires

*Sunday*

8:00 Rise, helps with household duties  
Goes to Sunday school and church  
Go to show or riding Sunday afternoon

• • • • •  
*Robbie Lee H., thirteen years old, seven in the family.*

*Monday through Friday*

6:30 Rise

7:00 Fix lunch for herself

7:45 Catch school bus

4:30 Arrive home from school, and eat main meal of day

5:00 Wash dishes

5:30 Goes bicycle-riding

7:00 Study

9:30 Retires

*Saturday*

9:30 Rise

9:45 Helps prepare breakfast

10:15 Helps clean house and other chores around the place during the day.

Goes to show occasionally on Saturday afternoon

Selects practically all clothing.

*Sunday*

Does not go to Sunday school or church. Goes visiting or rests at home and reads. Does not work outside or contribute to family income.

*Kathryn W.*, sixteen years old.

*Monday through Friday*

- 5:30 Rise
  - 5:40 Prepares breakfast for eight people alone
  - 6:30 Listens to radio
  - 7:30 Gets ready for school
  - 8:15 Goes to school
- 

- 4:30 Comes home from school
- 4:30 Rest
- 5:00 Study
- 6:00 Cooks evening meal for seven alone
- 7:00 Listens to radio
- 9:00 Retires

*Saturday*

- Helps with laundry in morning
- Plays ball or takes walk in afternoon
- 9:00 Retires

*Sunday*

- Does no household chores of any kind
  - Goes to Sunday school and church
  - 10:00 Retires
- . . . . .

*Elizabeth*, high-school senior, seventeen years old.

*Typical week days*

- 7:00 Get up, dress, make bed
- 7:30 Breakfast
- 7:45 Brush teeth, wash, fix hair
- 8:00 Leave for school
- 8:20 to 3:00 School
- 3:30 Get home and do home work which takes anywhere from a hour to the rest of the afternoon
- 6:30 Dinner
- 9:00 Bath
- 9:30 or 10:00 To bed

*Saturday*

- 9:00 Get up, dress

9:15 Breakfast  
9:30 Make bed  
9:45 Get home work  
11:00 Bath and get dressed for luncheon, movie, or shopping  
3:30 Home again and rest before dinner  
6:30 Dinner  
7:00 Usually a date or an enjoyable evening at home with family

*Sunday*

8:00 Get up, dress, make bed  
8:30 Breakfast  
9:15 Leave for Sunday school and church  
12:30 or 1:00 Dinner  
2:00 Rest  
6:00 Supper  
10:00 Bath and to bed

My house responsibilities are to make bed and keep room neat. I either buy my clothing or it is made by a dress maker. Live in city—do not contribute to income. Recreations—sports of all kinds, shows, dances.

**Activities of household management.** So far we have seen housekeeping activities and household management through the experiences of other girls, but this is not a complete picture. Indeed it would be impossible to get a complete picture of the whole United States through personal experiences. In some households income work such as helping on a farm or in a store; posting books on Saturday for a photographer father, and so on, are responsibilities for an important part of the time. In general household activities that must be planned and managed for family groups include such as these listed for you. By checking, it will at once be possible to find the ones represented in the management of your own home. Some common to your home may be omitted in this list.

**Sleeping.** Sleeping calls for providing beds and bedding, making beds, and keeping them clean. Where, for instance, here are six persons, each with a bed, not only will bed-making as a daily activity be large but also laundering of sheets, pillow cases, cleaning of blankets, comforters, and bedpreads as well as replacement of all these items when they

wear out. Daily care and replacement will represent considerable managerial time and ability.

**Bathing and toilet.** Laundering towels, wash cloths, bath mats, shower curtains, window curtains; cleaning tubs, walls, floors, and so on are needed to keep bathrooms in order. Purchase of soaps, cleaning powders, towels, shower curtains, bathmats, and the like, are additional work. Where there is but one bath for several persons, a time schedule may be necessary. Though ordinarily established by custom, some households post schedules that must be worked out in terms of individual convenience. Households without bathrooms have the added problem of setting up tubs, carrying water, emptying it, washing the tub, and putting it away. Obviously use is much more difficult than where there are set tubs, running water, and well-heated rooms.

**Food.** Household activities associated with food include its raising (gardening, raising fowls and food animals); preparing, preserving, serving, eating, and dish-washing. In the rural home, garden vegetables will be raised and gathered, fowls killed and dressed, eggs gathered, cattle raised, cows milked, or other production work carried on. The preparation of garden-raised potatoes will include washing as well as paring and boiling, or the preparation of home-raised fowls will include killing, picking, drawing, stuffing, trussing, roasting, and carving. In the city, chickens may come ready to remove from a clean parchment paper and transfer to the roaster and season. A time-controlled electric oven with temperature regulator may be set to do the roasting without further watching.

Milk too may be a matter of bringing in the bottles left by a milkman, or it may mean feeding the cow, cleaning the stable, milking, straining or separating the milk and cream, washing milk dishes, making butter and cheeses, and keeping the milk room or dairy house clean. So too the serving of food may be easy or laborious according as it is simple or elaborate. In one home more time may be used for raising and preparing foods, and less is devoted to serving. In another

serving may involve much time and skill. Service can be made so very elaborate that it passes the point of pleasure and becomes a burden. Laundering fine table linens that require much pressing to bring out the pattern of embroidery or lace, menus served in many courses with much delicate china that requires careful handling, sitting over coffee for conversation at the end of a dinner increase both the time and labor needed for serving. Again there may be more cooking utensils when elaborate recipes are used, and more cooking dishes as well as more serving china and silver call for more laundering of dish towels. However, elaborately served meals may be desired by the family, and if so, household management will call for deciding whether they are worth the cost in money, if labor is employed, or the cost in family work. The art of management comes in finding the point of balance.

So too care in preserving food in the home may be a small or large work item. If fruits, vegetables, meats, and so on are canned, pickled, dried, or otherwise preserved at home, much time will be needed during the summer and early fall for this work. Domestic and wild fowl, as well as other meats are canned, salted, or otherwise preserved in some rural homes. In city homes there is likely to be no garden, and there can be no barn yard to produce the food. In all probability there will be little space even for storing foods that may have been canned or otherwise preserved in factories. Home preservation will be for a comparatively short time. It will consist of

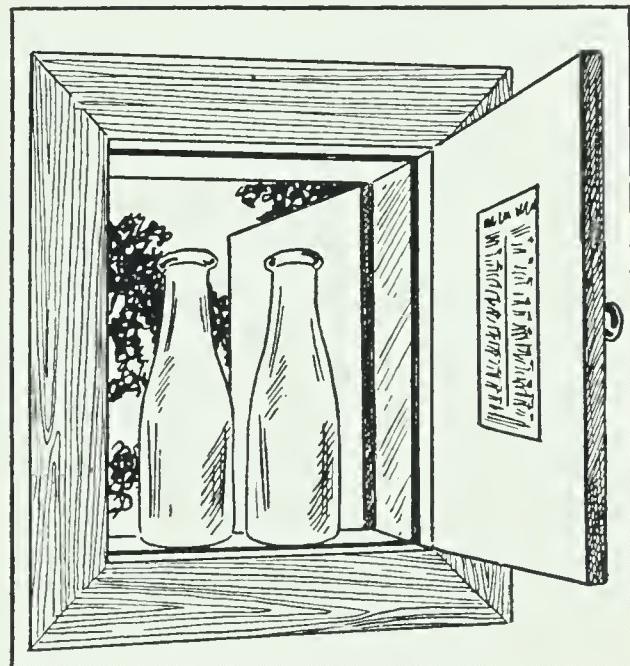


Fig. 10. A milk-receiving window that latches on the inside when the outside door is closed. The inside door shows milk card.

methods that can be carried on largely in an ice-box or refrigerator. Supplies will be purchased but a few days in advance. The wholesaler, warehouse, and local retail grocer will perform most of the storage activities that were once a part of the household routine. In warm climates where home gardens yield the year around, there also will be a minimum of effort for either household or commercial canning of foods.

**Cleaning.** Every house gets dirty but one much faster than another. The soot, dust, and sand of the atmosphere; the mud, dust, or snow of the street determine in large measure what kind of soiling will take place and how fast. The living-room paper on a farm-house parlor in Maine was cleaner after 125 years than that of a Chicago house after six months' use. The farm house was at the edge of a pine wood with the ocean beyond. Only wood was used for fuel in the house, and the parlor was reserved for use on very special occasions. The city atmosphere was full of constantly settling coal soot, and greasy foods were fried on top of the stove.

Also the way the house is built, and the habits of family members will make a difference. Much street dirt carried on shoes will be left in the entries and on the stair carpets of apartment buildings. Some houses have entry ways and wash rooms where rubbers can be removed. Much of shoe sole dirt is scuffed off on floor coverings with walking through entries and halls.

Cleaning will include such activities as sweeping or vacuum cleaning; dusting and polishing furniture; waxing or scrubbing floors; washing windows, mirrors, walls, bathroom and kitchen lavatories, tubs, and sinks; scrubbing and disinfecting bathroom toilets or outdoor privies; polishing metals; removing ashes from fireplace or cook stove, and dusting hearth or washing stove top and polishing its sides, boiling gas burners and washing stove trays; cleaning and trimming kerosene stove or lamp wick; refilling stove tanks or lamps; and washing lamp or stove chimneys. Sweeping and scrubbing porches and walks; airing and sunning blankets, down puffs, draperies, and other materials not easily washed; scrubbing

garbage cans; and cleaning after special musses made by dogs, cats, or other pets are a few of the specific items of household cleaning.

Some cleaning, such as laundry work and dry cleaning, can be sent out to commercial establishments, but cleaning such as sweeping; dusting; polishing door knobs, knockers, or other attached metal; washing windows; scrubbing floors; washing enameled bath and other plumbing fixtures; washing walls; painting; papering; cleaning closets; making beds; washing dishes; cleaning stoves, fireplaces, furnaces basements, attics, yards, and so on—all must be done on the premises. Either family members must do this work or persons from outside hired to do it.

**Chores.** A variety of daily or periodic light jobs, of which the following are illustrative, are connected with housekeeping. Wood or coal for a fireplace or kitchen stove must be carried from basement or shed to the living-rooms or kitchen; the furnace must be stoked, the ashes pulled and hauled; the city dog must be taken out for an airing; water for drinking, dish-washing, bathing, and so forth must be carried in and slops carried out when the house has no plumbing. If there are oil lamps instead of electric lights, they must be cleaned; if the hamlet has no milk-delivery system, the milk must be called for; if the mail is left in a box on the cement highway at the end of the private road, the mail must be collected; if the kindergarten or grade school is at some distance, little children will need to be taken and called for. Thus the list of household chores might be expanded in an almost limitless way.

**Laundering.** There are both garments and household furnishings such as table cloths, napkins, doilies, sheets, pillow cases, counter panes, or spreads; bath, hand, glass, and dish towels; wash cloths, dish cloths, and dusting cloths; glass curtains, shower curtains, bath mats, rag rugs, and so on. These must be done at home or collected, listed, sent to a commercial laundry, the bill checked and paid, the items sorted, and put away.

**Mending, garment-making, knitting, embroidery, weaving, rug-weaving.** Many home crafts are carried on, not for sale but for home consumption. Mending, garment-making, towel and table linen hemming, embroidering, and so on are familiar activities. Where the family income is small in relation to the needs, sheets that have worn thin in the center can be split, hemmed along the raw edge, and the selvage edges laid one on top of the other and stitched into a seam resembling a flat-felled seam; table cloths with both good and worn spots may be cut into napkins or kitchen towels and hemmed. The unworn portion of silk or soft wool garments may be cut into dusters or polishing cloths. The better parts of silk hose or worsted wool garments may be used in rugs. Different homes show wide variety in the needle crafts and weaving that are retained.

**Physical care and training of babies and little children.** This includes all the activities of feeding, bathing, changing diapers, dressing and undressing, providing a good bed and keeping it clean and clothing laundered, keeping constant watch lest they fall, burn themselves, get into poisons, or break valued possessions about the house, teaching them by playing with them, and so on.

The schedules that follow for the care of babies cover little more than feeding and rest. No time allowance is given for changing diapers, bathing, laundering of the baby's garments and bedding, or care and training during play time. After studying these schedules carefully, show where it would be necessary to fit in such general housework as marketing, preparing and serving family meals, cleaning the house, laundering, and so on, if one person did all the work.

#### BABY'S DAILY TIME CARDS<sup>1</sup>

It is advisable to establish at an early age a schedule for the baby's daily program. This timetable is made for mother and baby, and certain adjustments must be made in compliance with

<sup>1</sup> Reproduced by permission of the Children's Bureau, U. S. Department of Labor, Washington, D. C.

the life of the family. It is important, however, that the infant should be fed at regular intervals and at the same intervals each day. The usual interval between feeding is 4 hours, but during the early months some physicians prescribe a 3-hour feeding interval. The first feeding is usually given at 6 A.M., but if the day for baby and mother begins at 7 A.M. then the schedule must be adjusted accordingly, keeping the intervals between feedings the same.

#### FIRST 4 MONTHS

- 6:00 A.M. Breast feeding. Put in crib to sleep.  
9:15 A.M. Undress baby for bath. Give plain cod-liver oil or other source of vitamin D (to be ordered by physician). followed by orange juice or tomato juice. Before bath let baby kick and exercise for a few minutes while lying on bed. Bath.  
10:00 A.M. Breast feeding.  
10:20 A.M. Long nap indoors with window open or out of doors according to weather. Sun bath may be given before nap. Drink of water after nap.  
2:00 P.M. Breast feeding.  
2:20 P.M. Long nap indoors with window open or out of doors. After nap, drink of water.  
5:15 P.M. Undress for night. Before putting on baby's night clothes let him kick and play quietly on bed a few minutes. Cod-liver oil or other source of vitamin D and orange juice or tomato juice.  
6:00 P.M. Breast feeding.  
6:20 P.M. Bed; lights out, windows open, door shut.  
10:00 P.M. Breast feeding.  
(2:00 A.M. Breast feeding. This feeding need not be given after the baby is 2 months old.)

#### TRAINING THE BABY

*Parents must work together from the baby's birth  
to teach him good habits*

The mother's mental attitude while she is taking care of the baby has much to do with the baby's behavior. She should be calm, cheerful, and affectionate, and the baby, if physically comfortable, will give a quiet and smiling response.

It would be wise for the father also to help with the care of

the baby so that if the mother becomes ill or has to leave home for a period he can meet this emergency until help can be provided. Under these circumstances he will also be prepared to supervise the infant's care.

*Feeding.* Feed the baby regularly according to the schedule, every 3 or every 4 hours, as the doctor advises. Before and after feeding hold the baby up over the shoulder and pat him gently on the back so that any air that has been swallowed may be expelled.

*Sleep.* The baby's sleeping periods should be regular. Some babies will require a little less sleep as they grow older and the afternoon nap may be somewhat shorter.

*Exercise and play.* When the baby is undressed for the morning bath or before the 6 P.M. feeding, the mother and father may play gently with him for a few minutes. (He should not be entirely undressed during this time unless the room is warm.) It is important for both parents to have a regular time to play with the baby.

*Crying.* The mother soon learns to distinguish the cry of pain from that of fretfulness or habit. Crying is a natural expression of the baby. He often cries to be taken up. One should be sure that the baby is not thirsty, hungry, or overfed; that he is dry and comfortable; and that he is not ill. If no cause for crying can be found, it is better to leave him alone. Under these circumstances he will not do himself any harm by crying.

*Sun baths.* The baby may have sun baths when he is 3 or 4 weeks old. Do not put him in the sun on the hottest days.

#### BABY'S DIET

*Breast milk.* Nurse the baby regularly (see Feeding, above).

*Cod-liver oil.* When the baby is 2 or 3 weeks old give him plain cod liver oil tested for vitamin D (the antirachitic factor) or other source of vitamin D (to be ordered by physician). Begin with  $\frac{1}{2}$  teaspoonful once a day. As the baby gets older give more, so that by the age of 3 months he will be getting 1 teaspoonful twice a day, and by 3 months  $1\frac{1}{2}$  teaspoonfuls twice a day. Give the oil when the baby is undressed for the bath and for the night.

*Fruit juice.* Give orange juice or tomato juice (fresh or canned) toward end of the first month. Begin with 1 teaspoonful of orange juice once a day. Increase this gradually to 1 tablespoonful twice a day by the time he is 2 months old. If tomato juice is used, give twice as much as you would of orange juice. Both should be strained.

*Water.* Two or three times a day (oftener in summer) offer the baby boiled water, not sweetened. He may refuse it, but it should be offered to him anyway.

For discussion of daily care, diet, sun baths, habits, and prevention of disease see Infant Care, U. S. Children's Bureau Publication No. 8.

### 5TH AND 6TH MONTHS

- 6:00 A.M. Breast feeding. Leave baby alone in crib to sleep or play.
- 9:15 A.M. Plain cod-liver oil or other source of vitamin D (to be ordered by physician), then orange juice or tomato juice. Bath. Before bath let baby kick and play freely on bed a few minutes without clothes.
- 10:00 A.M. Cooked cereal, then breast feeding.
- 10:20 A.M. Sun bath and long nap out of doors if weather permits, or nap indoors with windows open. Drink of water after nap.
- 2:00 P.M. Egg yolk, vegetables mashed through a strainer (from sixth month on), breast feeding.
- 2:20 P.M. Out of doors if weather permits—in sun part of the time except on very hot days. Short nap. Sun bath may be given before nap. Drink of water after nap. Play.
- 5:15 P.M. Undress for night. Before putting on baby's night clothes let him kick and play quietly on bed a few minutes. Cod-liver oil or other source of vitamin D and orange juice or tomato juice.
- 6:00 P.M. Breast feeding.
- 6:20 P.M. Bed; lights out, windows open, door shut.
- 0:00 P.M. Breast feeding. (If the baby does not waken, this feeding may be omitted.)

### TRAINING THE BABY

*Parents must work together to teach  
the baby good habits*

*Feeding.* Feed the baby regularly. Give new foods in small mounts at first, and the baby will learn to take more of them. He may refuse a new food or spit it out because he has not yet learned how to swallow solids. Keep on giving him the new food from time to time, and he will learn to take it. Begin to teach the baby to help hold the bottle while drinking water.

*Sleep.* See that the baby's waking hours are in the daytime—in the late afternoon—so that he will not be wakeful at night.

*Toilet habits.* Begin training for regular bowel movement.

*Exercise and play.* Put into the baby's crib simple, washable, large toys that will not break, such as a rattle and a wooden doll. Tie them to the crib with short pieces of tape. Give exercise morning and evening. (See card for first 4 months.) The father and mother will have a chance to play with the baby in the morning after he is undressed for the bath and before he is dressed for the night. Play should not be rough nor exciting.

*Sun baths.* Keep on giving sun baths. On the hottest days do not put the baby in the sun between 11 A.M. and 3 P.M.

#### BABY'S DIET

*Cow's milk.* If the doctor advises it, one feeding a day of boiled cow's milk mixture may be given instead of a breast feeding.

*Cereal.* Once a day (before the 10 A.M. breast feeding) give a cooked cereal such as farina or oatmeal. At first give 1 to 2 tablespoonfuls of the cereal at a time, cooked thin. Give more and more until the baby gets 2 to 4 tablespoonfuls. Make the cereal thicker as the baby gets used to it.

*Vegetables (sixth month).* Green vegetables should be given every day. Give a green leafy vegetable such as spinach, chard, beet greens or cooked lettuce two or three times a week. On the other days give carrots, green peas, green lima beans, asparagus, or string beans. Boil vegetables long enough to make them tender (test by pricking with fork). Use only a little water, slightly salted, and serve the water with the vegetables. Put the cooked vegetables through a sieve or strainer. Begin by giving 1 teaspoonful a day and increase the amount to 1 tablespoonful.

*Egg yolk.* The yolk of an egg may be given, a little at first (at the 2 P.M. feeding), then more until the baby gets a whole yolk daily, soft-boiled, hard-boiled and mashed, or coddled.

*Cod-liver oil.*  $1\frac{1}{2}$  teaspoonfuls of cod-liver oil twice a day.

*Fruit juice.* 1 tablespoonful of orange juice or 2 tablespoonfuls of tomato juice twice a day.

*Water.* Offer the baby boiled water, not sweetened, once or twice a day—oftener in summer.

#### 7TH, 8TH, AND 9TH MONTHS

6:00 A.M. Breast feeding. Leave baby alone in crib to sleep or play.

9:15 A.M. Plain cod-liver oil or some other source of vitamin D (

be ordered by physician), then orange juice or tomato juice.

Bath. Before bath let baby kick and play freely on bed a few minutes without clothes.

- 10:00 A.M. Cooked cereal, then breast feeding.
- 10:20 A.M. Out of doors till feeding time if weather permits. Sun bath may be given before nap. Long nap, followed by drink of water. Play.
- 2:00 P.M. Vegetable and egg yolk, then breast feeding.
- 2:20 P.M. Out of doors if weather permits—in sun part of the time except on very hot days. Short nap. Drink of water after nap. Play.
- 5:15 P.M. Undress for night. Before putting on baby's night clothes let him play on bed a few minutes. Play must not be exciting nor rough.  
Cod-liver oil or other source of vitamin D and orange juice or tomato juice.
- 6:00 P.M. Cooked cereal, then breast feeding.
- 6:20 P.M. Bed; lights out, windows open, door shut.
- 10:00 P.M. Breast feeding. (This feeding may be omitted during this period.)

#### TRAINING THE BABY

*Parents must work together to teach  
the baby good habits*

*Weaning.* When the baby is 7 months old ask the doctor about weaning him.

For a week give one feeding of cow's milk a day and three breast feedings. (The 10 P.M. feeding can usually be omitted at this age.) Then for 4 or 5 days give two feedings of cow's milk a day and two breast feedings. For the next 4 or 5 days give three feedings of cow's milk a day and one breast feeding. After that (15 to 17 days after the beginning of weaning) the baby should get no breast feedings, but should get four feedings of cow's milk a day, as well as cereal, vegetables, egg yolk, orange juice or tomato juice, and cod-liver oil.

*Sleep.* The baby should have a long morning nap and a short afternoon nap.

*Solid foods.* If the baby has not yet learned to take solid food, keep on teaching him, giving first the solid food and afterward the milk. Do not worry if he refuses to eat solid food. If you do

he will soon learn that he can get a great deal of much-desired attention by refusing to eat.

*Toilet habits.* Keep on training for regular bowel movement.

*Exercise and play:* At playtime put the baby on a blanket on the floor or in a clothes basket or a play pen and let him learn to amuse himself with simple large toys, such as balls, blocks, and boxes.

*Tantrums.* Do not give in to the baby if he holds his breath or cries, or shows temper in other ways. If he does this, he is already being spoiled.

*Sun baths.* Keep on giving sun baths.

#### BABY'S DIET

*Cow's milk.* Each time you leave out a breast feeding give a bottle of milk mixture or of whole milk, whichever the doctor advises. Give the baby fewer and fewer breast feedings as he learns to take cow's milk feedings instead.

*Vegetables.* Green vegetables should be given every day, 1 to 3 tablespoonfuls.

*Egg yolk.* Give the yolk of a coddled, soft-boiled, or hard-boiled egg every day.

*Cereal.* Twice a day (10 A.M. and 6 P.M.) give 4-5 tablespoonfuls of thick, well-cooked cereal, such as whole-wheat breakfast food or oat meal or farina.

*Cod-liver oil.* 1½ teaspoonfuls of cod-liver oil twice a day.

*Fruit juice.* 1 tablespoonful of orange juice or 2 tablespoonfuls of tomato juice twice a day.

*Water.* Offer the baby boiled water, not sweetened, at least twice a day—oftener in summer.

*Bread.* After the baby's first tooth has come, at meal times give him bread dried in the oven or zwieback occasionally to teach him to chew.

#### 10TH, 11TH, AND 12TH MONTHS

- 6:00 A.M. Boiled whole milk. Leave baby alone in crib to sleep or play.
- 8:15 A.M. Plain cod-liver oil or other source of vitamin D (to be ordered by physician), then orange juice or tomato juice. Bath.
- 9:00 A.M. BREAKFAST: Cooked cereal with boiled whole milk.
- 9:20 A.M. Out of doors till dinner, if weather permits. Sun bath may be given before nap. Long nap. Play.

- 1:00 P.M. DINNER: Egg yolk; green vegetable; baked potato; boiled whole milk.
- 1:20 P.M. Out of doors if weather permits, in sun part of the time except on very hot days. Short nap. Drink of water after nap. Play in crib.
- 5:00 P.M. Undress for night. Play and exercise on bed or on blanket on the floor.  
Cod-liver oil or other source of vitamin D and orange juice or tomato juice.
- 5:30 P.M. SUPPER: Cereal, zwieback, or dry toast; applesauce or prune pulp; boiled whole milk.
- 6:00 P.M. Bed; lights out, windows open, door shut.

#### TRAINING THE BABY

*Parents must work together to teach  
the baby good habits*

*Feeding.* Give up the 10 P.M. feeding. Finish weaning in the tenth month if it is not already done.

Give the baby a drink of milk at 6 A.M. and three regular meals but no food between meals, and no sweets in any form. If he is not allowed to taste candy or ice cream, he will not miss them. Do not give him tastes of food from the family table.

Teach the baby to hold the bottle himself. During weaning it is well to teach him to drink from a cup instead of a bottle. He may begin learning to hold the cup by the end of the first year.

*Sleep.* Put the baby to bed at 6 in the evening to sleep till morning. The diaper should be changed at 10 P.M. He should still have his regular long morning nap and may need a short afternoon nap.

*Toilet habits.* Keep on training for regular bowel movements and begin training for control of bladder.

*Exercise and play.* Let the baby learn by himself to stand and walk; do not try to teach him. Let him pull himself up in a play pen or in a crib with high sides. Give him simple toys, too large to be swallowed. Let him find out for himself how to get back toys that he has dropped.

*Sun baths.* Keep on giving sun baths.

*Protection against communicable disease.* Immunization against diphtheria should be started when the baby is 9 months old. Before he is 12 months old he should be vaccinated against smallpox.

## BABY'S DIET

*Cow's milk.* 28 to 32 ounces of boiled whole milk a day, in four feedings.

*Cereal and bread.* 4 to 5 tablespoonfuls of well-cooked cereal twice a day. Dry toast or zwieback.

*Eggs.* Give egg yolk daily, for breakfast or dinner.

*Vegetables.* 3 tablespoonfuls of mashed vegetables daily. Baked white potato three or four times a week.

*Cod-liver oil.* 1½ teaspoonfuls of cod-liver oil twice a day.

*Fruit juice.* 1 tablespoonful of orange juice or 2 tablespoonfuls of tomato juice twice a day.

*Cooked fruit.* Applesauce or prune pulp may be given daily.

*Water.* Offer the baby boiled water, not sweetened, at least twice a day—oftener in summer.

## 1 YEAR TO 15 MONTHS

*For some children of this age it is better to use the schedule for the child 16 months to 2 years*

- |            |   |
|------------|---|
| 6:00 A.M.  | Toilet. Wash hands and face. Brush teeth. Cup of milk.<br>Sleep or play in crib.  |
| 7:30 A.M.  | Toilet. Bath. Dress.  |
| 8:00 A.M.  | BREAKFAST: Fruit juice, cooked cereal; soft-boiled or poached egg; crisp bacon occasionally; toast; boiled whole milk.<br>Cod-liver oil or other source of vitamin D (before or after breakfast).<br>Toilet for bowel movement. Wash hands.<br>Out of doors as soon after breakfast as weather permits.<br>Play in sun when possible. |
| 10:30 A.M. | Toilet. Wash hands.<br>Nap—out of doors if weather permits. Sun bath may be given before or after nap.  |
| 12:30 P.M. | Toilet. Wash hands and face.<br>DINNER: Green vegetable; potatoes, rice, or macaroni; meat or fish; stewed fruit or simple pudding; boiled whole milk.  |
| 1:30 P.M.  | Toilet. Wash hands.<br>Out of doors as long as weather permits. In sun when possible, playing or in go-cart.  |
| 3:00 P.M.  | Toilet. Wash hands.<br>Out of doors.  |
| 5:00 P.M.  | Toilet. Undress for night. Wash.  |

- 5.15 P.M. SUPPER: Cooked cereal or rice; milk-vegetable soup or boiled whole milk; milk toast or dry toast; green vegetable or raw or cooked fruit.  
Cod-liver oil or other source of vitamin D (before or after supper).  
Toilet. Wash hands.  
Brush teeth.
- 6:00 P.M. Bed; lights out, windows open, door shut.

This plan may be varied to suit the family schedule, but one like this should be arranged and kept to closely. Whatever plan is used, meals should be at the same time every day.

## TRAINING THE CHILD

*Parents should realize that the baby is now entering childhood and should help him to be more and more independent*

*Feeding.* Give three regular meals a day. A cup of milk may be given in the midmorning or midafternoon unless it spoils the child's appetite for his next meal. Begin to teach the child to hold his cup, and, later, his spoon. As he learns to hold the spoon allow him to eat the last few mouthfuls without help.

*Sleep.* Put the child to bed at 6 o'clock to sleep all night. He should have a long nap every day, just before dinner or just after. At this age the second nap may be given up.

*Play and exercise.* At this age the average child learns to walk. To help him learn to walk, a play pen is useful, both indoors and outdoors. During the playtime the child should amuse himself, without demanding attention from any one else.

The child's room should be furnished simply so that he may be allowed to touch and investigate everything in reach. Always be consistent in what you let him touch or handle and in what you let him do, so that there will be no confusion in his mind as to what he may or may not do.

*Toilet habits.* See that the child has a bowel movement at the same time each day. Take him to the toilet regularly.

*Sun baths.* Give sun baths all the year round—in the hottest weather before 11 A.M. and after 3 P.M.; in cooler weather in the middle of the day.

*Protection against communicable disease.* By this time the child should have been immunized against diphtheria and vaccinated against smallpox.

## CHILD'S DIET

*Milk.* 1½ pints to 1 quart of milk a day, but no more.

*Raw fruit and fruit juice.* Give at least one raw fruit a day (peeled), such as oranges, grapefruit, tomatoes (sometimes considered fruit); very ripe apples, thinly sliced; very ripe bananas.

*Cooked fruit.* Baked apples, applesauce, stewed pears, peaches, and apricots should be given often.

*Fresh vegetables.* One or more a day, including a green leafy vegetable such as spinach, turnip greens, or beet greens at least three or four times a week—preferably daily. Besides the vegetables given in the first year give kale, beets, celery (stewed), squash, and cabbage.

*Egg.* A whole egg daily, soft-boiled, hard-boiled, poached, or scrambled, or used in custard or other food.

*Meat or fish.* Give small servings of tender meat—beef, chicken, lamb, or liver—boiled, broiled, or roasted, and finely minced, at least three times a week. Once or twice a week steamed, baked, or boiled fresh fish—cod, haddock, or halibut—may be given instead of meat.

“*Starchy vegetables,*” such as potatoes, rice, macaroni, or hominy, once a day.

*Cereal or bread.* Cooked cereal once or twice a day; bread and butter two or three times a day.

*Cod-liver oil.* Give 1 to 1½ teaspoonfuls of cod-liver oil twice a day.

*Water.* Offer water, not sweetened, at least twice a day, oftener in summer.

## 16 MONTHS TO 2 YEARS

- 7:00 A.M. Toilet. Wash hands and face. Brush teeth. Dress.
- 7:30 A.M. BREAKFAST: Fruit juice; cooked cereal with milk; toast coddled, soft-boiled, or poached egg; crisp bacon occasionally; boiled whole milk.  
Cod-liver oil (before or after breakfast).  
Toilet for bowel movement. Wash hands.  
Out of doors as soon after breakfast as weather permits:  
Play in sun when possible.
- 9:30 A.M. Bath. (Bath may be given before supper if more convenient.)
- 10:00 A.M. Toilet. Wash hands. Nap—out of doors if weather permits. Sun bath before or after nap.
- 12:00 noon Toilet. Wash hands and face.  
DINNER: Green vegetable; baked potato, rice, hominy or plain boiled macaroni; meat or fish (at least three times a week); simple pudding; boiled whole milk.

- 1:00 P.M. Toilet. Out of doors, playing or in gocart.
- 3:00 P.M. Toilet. Wash hands.  
Boiled whole milk, or fruit, or fruit juice.  
Out of doors as long as weather permits. In sun when possible, playing or in gocart.
- 5:00 P.M. Undress for night. Toilet. Bath. (Bath may be given in morning if more convenient.)
- 5:15 P.M. SUPPER: Cooked cereal or rice; milk-vegetable soup or boiled whole milk; toast; raw or cooked fruit.  
Cod-liver oil (before or after supper).  
Toilet. Wash hands. Brush teeth.
- 6:00 P.M. Bed; lights out, windows open, door shut.

This plan may be varied to suit the family schedule, but one like it should be arranged and kept to closely. Whatever plan is used, meals should be at the same time every day.

#### TRAINING THE CHILD

*Parents are the child's first teachers. They should teach him to help himself*

*Feeding.* Give three regular meals a day. Let the child feed himself. Do not nag him nor coax him to eat. He should be learning to eat many different kinds of food. (See diet list on card for child of 1 year to 15 months.)

*Sleep.* The bed hour should still be 6 o'clock. At this age the child should have a nap every day either in the late morning or in the early afternoon, depending on the dinner hour. Every child needs a daily nap until he is old enough to go to school, and some children need it even after they have begun school.

*Play and exercise.* Give the child the right sort of playthings, and he will learn to play by himself indoors or outdoors. Give him a sand box to dig in and a wheelbarrow or a small cart to push; colored blocks, nests of boxes, strings of spools, balls, a box with cover that comes off easily, linen picture books with pictures of familiar objects, rubber dolls, or other soft dolls or animals. He is still too young for mechanical toys.

Let him have playmates of his own age.

*Dressing.* Teach the child to help in dressing and undressing himself.

*Toilet habits.* By 2 years or soon afterward the child should begin to go to the toilet.

*Sun baths.* Let the child play in the sun except in the hottest weather in the middle of the day.

#### CHILD'S DIET

Give the same food as in the previous 3 months (see previous card). One or two tablespoonfuls of meat or fish may be given daily.

Do not give fried food, greasy foods (such as "made gravy"), the less easily digested foods (such as cucumbers, pickles, pork, veal) nor such sweets as pie, cake, fancy cookies, candy, ice cream. Leave these for later years. A child will not cry for a food that he has never tasted. Do not give the child tastes of a food just to see whether he likes it.

Offer the child water, not sweetened, at least twice a day—oftener in summer.

**Care of the aged.** A vast number of the aged are cared for in the homes of their children. Some are semi-invalids or bedridden, requiring definite nursing care, others are quite able to get about and care for their own personal needs. House keeping arrangements will include plans for cleaning their rooms, doing their laundry, ensuring quiet for their sleep, entertaining members of their family or old friends whom they desire to see and helping generally to make life worth while for them.

**Care of the sick, convalescent, and mentally incapable.** Though hospitals have removed much of nursing care from homes, particularly that connected with operations, there still remains a great amount for private homes. There are the brief illnesses such as those occasioned by colds, indigestion, and so on, and there are epidemics of measles, scarlet and typhoid fever, for which adequate hospital space is not provided throughout the country over. In families where there are mentally defective children a permanent problem of care similar to that for babies must be established. They may be of adult size in body without being more capable than a baby.

**Tutoring and teaching.** Where there are children, teaching by example will take place whether planned for or not. The child sees a thing done and imitates. The thing done may be useful or not. Like the father who swore while complaining that he could not understand where his daughter had learned

to swear, adults often do not appreciate that they are the teachers. The pattern of housekeeping like the language used will be taken on as a result of living in the home. Just as the language taken on at home may be grammatically incorrect, so too the pattern of housekeeping may be one of sloppy carelessness. If the housekeeping procedures are intelligently set up to provide for sanitation, comfort, and esthetic considerations, those procedures are likely to be accepted by sons and daughters. Discussion and explanation based on facts make for understanding and intelligence.

Again, accepting a pattern of housekeeping is very different from so understanding about the needs of people as to be able to adjust when it is necessary to move or go to live among others whose pattern differs. One can accept a pattern of living without understanding and hence be unable to make intelligent adjustments to changed conditions.

Tutoring is different from this type of undirected family teaching in that it is a conscious effort to give understanding, new abilities and so on. A certain amount of tutoring or conscious training goes on in good homes. Children may be tutored in spelling, numbers, or languages. They may be taught why as well as how to make a bed, prepare a meal, wash dishes, and manage, if the person who gives the instruction has acceptable standards and understands how and why.

**Group recreation and entertaining.** Some families rarely take any of their recreations together. Fun is something they do not have in common. Other families constantly emphasize fun even in their serious activities. Children on routine jobs about the house put fun into them by singing or humming if in no other way. Brothers and sisters make play of their work; parents and children are companionable and highly democratic in their home relationships. In some one-child families parents and children are companionable over their work in much the way that brothers or sisters might be.

This casual recreation is supplemented in many houses by celebrations of birthdays, holidays, anniversaries, and other memorable occasions. From a housekeeping point of view they

may create a bulk of work and cost or they may be planned on a simple, modest scale. Even the simplest parties, however, increase the housekeeping activities of cleaning before and after, laundering table linens, cooking, serving, decorating, making or arranging favors, and planning for games.

**Influence of special workmen on housekeeping.** Among certain workmen a policy of leaving a job in such a condition that another person must be called, is not uncommon. An electrician or plumber who breaks plaster or mars varnish in doing his work will not mend the holes. Plasterers must be called to chink the hole, decorators to mend the paper or repaint the woodwork. Housekeeping work is increased to the extent of cleaning the muss made by the original worker as well as those who follow.

**Upkeep.** Upkeep or care and repair of the house includes repair of plumbing, opening of clogged drains, removal of leaves or birds nests from eaves and down-spouts, painting, mending broken plaster, scraping and waxing or varnishing worn and stained floors, replacing linoleum, papering, and many others. Special equipment such as water softeners may need recharging, or replacement of parts; the wringer may need a new roller; the refrigerator new packing in the doors; electric stoves new units or heating elements; light sockets new bulbs; toilet boxes refills. The upkeep of a building requires constant attention to details. Household management must encompass all of them in the housekeeping plans worked out for any individual home.

**The relationship of building to housekeeping.** A certain man known never to do anything about his home and a bit parsimonious waxed eloquent about the quaint old house they should soon be in. It was exactly as it had been three hundred years ago, no modern plumbing, and the same great old fireplace in the kitchen. As a concession to need, a kerosene stove had been put into a shed adjoining the kitchen, but this was looked upon as something of a violation. The house was old and "so delightfully charming."

However, his wife was lamenting the fact that she should

be spending her summer under the most primitive and laborious housekeeping conditions. To spend her time taking the old rope bed apart because the latticed rope once used in lieu of springs had come loose; to chink plaster so the bats could not come through from the "charming" old loft; to carry water by pailfuls for dish-washing, scrubbing, and taking baths made good stories but poor daily living. She frankly admitted that she preferred modernity and a much more monotonous round of comforts and conveniences.

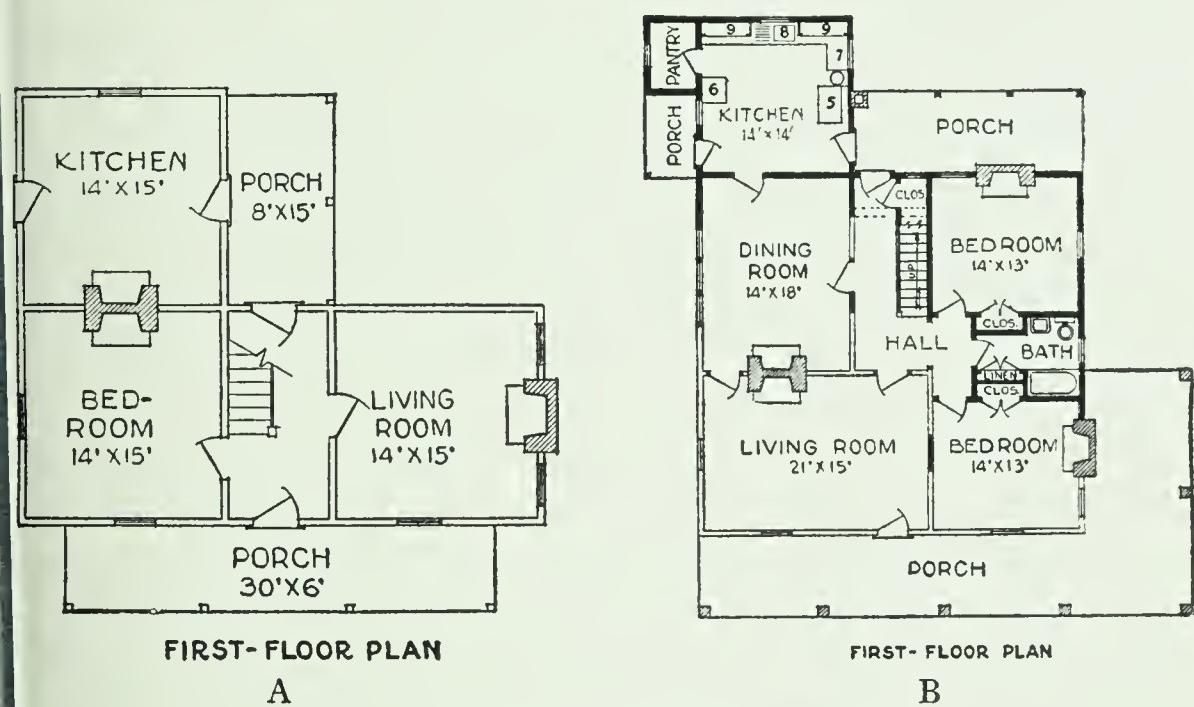


Fig. 11. Before and after remodeling.

Left, inconveniently arranged first floor. To get from the kitchen to either the bedroom or living-room it is necessary to cross the porch. After remodeling (right). In what respects is this plan more convenient?

The activities of housekeeping are changed in nature and amount by the neighborhood and the building as well as by the size of the family and its ways of living. The arrangement of rooms in relation to the amount of walking necessary (see Figure 11); the public services such as light and water that are brought into the house; the kinds and amount of household conveniences make work more laborious or easy depending upon how well they are thought out with reference to the use to be made of them. (See kitchen plan of portfolio section.)

Records. Grocery slips, rent and tax receipts, gas and electric bills, itemized bills from dry goods, furniture stores, or shops are among the records that may be needed if one is to know what one bought, as well as when and what it cost. A spindle, small drawer, or file box provide places for collecting grocery and other bills through the week or month. If charge accounts are carried, the sales slips may be sorted, studied, and paid at the beginning of the next month. If cash is paid at the time of purchase, the slips are no less valuable for showing what has been spent for different items and the extent to which prices may have fluctuated on items that are repeated from day to day. One week a head of cauliflower may be twenty-five cents and another week forty cents. Sugar or flour may not vary a fraction of a cent in six months' time. The sale slips sent with packages when filed become a permanent record so that five or ten years in the future one can look back to 1930 or 1935 or later to compare costs on different items of food.

A record of the amount of coal used one year will be a good basis for judging how much will be needed another year; the amount of paint used and the number of coats applied once will be a help in determining the probable cost of painting at a later date. Records are the means of knowing with certainty what one did or the amounts one spent. Some description of house temperature through the winter or condition of surface painted is an aid. The larger and more elaborate the home the greater the need for records and a system of account keeping, for the expenditures will be too numerous to remember. A desk with drawers or file cases account books, scratch pad, stationery, pencils, ink, blotters clips, and other necessary desk supplies make record-keeping easier. For those who have an interest in knowing what they have purchased and what they have spent, record keeping will be valuable. It may be the means of discovering an expensive purchase for something little enjoyed which could be eliminated in order to have money to do something more desirable.

Management, whether it be in business or at home, implies knowing first of all what one's situation is and what the possibilities are for making it what one would like. An inventory or list of furnishings and equipment can help one to see the relation of the amount of work required to the aids for doing it. Inventories are valuable not alone as a means of showing what one has for purposes of insurance and taxing, but as a means of indicating the kind and amount of house-keeping care needed.

Household management also calls for keeping records, studying them, and deciding whether to stick to the same plan, or work out and try a new one. To manage successfully one must in addition to knowing what one wants, be a careful observer, and skilful in analyzing situations. Often it is necessary to make adjustments to new situations as when a move is made from one section of the country to another. Wherever one lives, however, there is need for safety and good health, comfort, convenience, and esthetic qualities in one's housing. By different means these same ends can be obtained in diverse places.

**Routine.** The purpose of routine is to simplify jobs that must be repeated. Bed-making and dish-washing are familiar household tasks to which routine can be applied. Once an acceptable way of doing household jobs has been established, they can be repeated until the conditions are changed, and it becomes necessary to make adjustments. Routine so simplifies work that often people permit themselves to fall into routine habits of deadly monotony. The hotel, school lunch room, and boarding-house all face a problem of simplifying work. By having the same menus from week to week the cooks, cook's helpers, waitresses, dish-washers, and even the market and storekeepers know how to plan time for each day of the week. Confusion and loss of time because of change are avoided. Some households have baked beans every Saturday or chicken every Sunday. The planning and packing of school lunches too often becomes so much a matter of daily routine that little enjoyment is provided for eating.

Routine is highly serviceable for all tasks that recur regularly and are standardized for a particular house or school situation. The danger of routine is that people too often rely upon it and fail to work out a better new plan for getting a more desirable result. Routine is one of the many good things that needs to be used in moderation and often tested to be sure it is still serving the purpose for which it was originally worked out.

**Adjustment.** Adjustment implies change and the acceptance of new conditions. Acceptance then means that one has made a satisfactory plan or adopted one made by others. In changing from one school to another one learns to fit into or adjust to the scheme of things or one remains dissatisfied, apart from the new school situation and unadjusted. So too one may adjust to different households or to houses.

Though it is commonly necessary for an individual to adjust to a household, houses can be adjusted to individuals or groups of people as the need may be. It is the function of housing to fit the living needs of people, but people must learn to adjust or get along with each other. Commonly this latter is a slow process of social change as the result of give and take and learn, rather than a fast one of build or make over as in the case of the physical structure. This book is not designed to show much of the give and take and learn process of human adjustment, but it has among the illustrations many suggestions for ways to adjust the house to human demands. Household management can make the building and the plan for using it fit the needs of the household group.

**Standards.** When you have read the list of household jobs, you will probably think of several homes familiar to you in which the same tasks occur but where you know that the amount of work done is very different. There are considerations other than the kinds of work to be done when one tries to manage a household. If the person who manages the household in which you live suddenly went away and left you in charge you might try to carry on the schedule in the established way or you might think of things you would like to change. Per-

haps your changes would increase the amount of time needed for some part of the work ; they might reduce it. But probably you wouldn't be long in seeing that many factors are involved in determining what should be done. Questions would arise that either you alone or you in conference with other members of the household would be obliged to decide. For example, shall breakfast be served in the dining-room with a table cloth, attractive china, and in a leisurely manner, or will you resort to every possible short cut for saving time and energy? How often will you take all the bedding from the beds, turn the mattresses, and put on fresh linens? How often must the windows be washed, and how frequently must the curtains be laundered? Just how can one determine answers for *these questions?*

Standards in housekeeping will be revealed through considerations that determine how elaborately meals shall be served, or how clean the household shall be kept. If a school-girl thinks only of her own personal likes she might decide upon a simply served short breakfast because it is pleasant to sleep as long as possible in the morning and still be able to get to school on time. It might be that some other member would decide upon a simple standard to economize on money as well as time. Inexpensive china and oilcloth mats instead of linen doilies would serve. They can be cheerful, chosen to harmonize in color and design, and they can, with a minimum of labor and cost, be kept *healthfully clean*.

When it comes to deciding how often the mattresses should be turned and the beds made, conditions in the household as well as your personal taste or inclination will need to be considered. If it is a baby's bed it may be important to turn the pillow or mattress and straighten the sheets several times in a day because a baby spends so much of the day in bed. If the baby wets the sheets it may be desirable to change them also both for the sake of keeping the baby dry and comfortable and preventing the bed from becoming foul smelling.

Likewise an ill or convalescent person needs to have sheets and bedding straightened several times a day and clean sheets

daily. Because of the possibility of communicating diseases, beds such as those of hotels, tourist houses, and so on that are used by different persons, should have the mattress turned and fresh bedding used daily.

The standard for houses where the same person sleeps in the same bed can be less costly of time and money. The use of two fresh sheets and pillow cases once a week is a standard widely accepted in managing household beds. It is very pleasant to have fresh bed linens every day and a few families indulge in this luxury standard. Some have the mattress turned and the pillow cases changed twice a week with one fresh sheet for the top while the used top sheet is made to serve as the lower. Other families possess no sheets or pillow cases. For them to maintain a standard of even healthful cleanliness is obviously difficult.

The question as to how often the curtains shall be changed is not one of health as in the case of washing dishes or using clean sheets and pillow cases, but one of taste—what one can afford, and how dirty is the atmosphere? Cooking greases, coal soot, and street dust collect on curtains in different households at entirely different rates of speed. To look as clean in Pittsburgh or Chicago as in Palm Beach or Los Angeles requires infinitely more laundering or dry cleaning because the atmosphere outside that sifts into the house is soot laden. But dirt on curtains may rest harmlessly so far as health is concerned as long as the curtains do not blow. The dirt on them is offensive to the eye but not necessarily dangerous to health. If the choice of cleanliness rested between laundering the curtains or bedding oftener, the bedding might come first.

It is obvious that the bases for standards differ as well as the conditions that create a need for them. Health, cost, individual taste, or what one's friends may think, are important among the bases for determining standards, whereas conditions such as the use made of a bed, amount of atmospheric dirt, the amount of work a home-maker must do outside the home, awkwardness or convenience of the house, determine what standard can or should be set.

**Organization of jobs.** Good management in houses means that responsible members of the household must first study their situation to see clearly what it is. After that they are in a position to classify and group jobs, fitting them together. For example, washing and scrubbing are related jobs and one may plan to scrub the laundry, the kitchen floor, and porches on the laundry day, or one may plan to turn the mattresses and change the bed linen on the day when the bedroom is cleaned. Again one may plan to entertain on days immediately following days of thorough general cleaning.

**Interruptions.** Interruptions and need for quick adjustment of plans cannot be foreseen except in a very general way; yet every plan for a household routine should make some allowance for interruptions. The telephone must be answered; packages must be taken in; guests received; accidents cared for.

Time is consumed by such interruptions as answering doors. A locked letter box where mail can be safely kept until it is convenient to go for it, eliminates one of these. The home-made grocery or package-receiving window or the more perfected servidor reduce the interruptions incident to answering the kitchen door (see page 235).

It is probably evident that management whether of a commercial business or the household involves much more than an ability to do any one or all of the innumerable household tasks. Good household management means that one must know what conditions one wants and the best means for attaining them. It is not a thing for which a set of rules can be laid down. Constant study is needed in order to see relationships of cause and effect, and to determine what procedure is best for a given situation. It calls for questioning, weighing of possible results, and decisions.

**Household an environment for living.** As a guide for management one can clearly keep in mind that the house and household are the immediate living environment for most people. As such it should be safe from hazards and physically healthful. The management can help to produce self-respecting, self-reliant, and responsible citizens who are capable of

enjoying life. Much enjoyment comes from the beauty of surroundings and stimulating, harmonious relationships with other people. This implies, of course, that individual homes are important places for learning how to live and how to get along or adjust to others. Housing has some bearing upon the way people live together as you have already seen. Conditions of overcrowding and hard work put a strain into living that tends

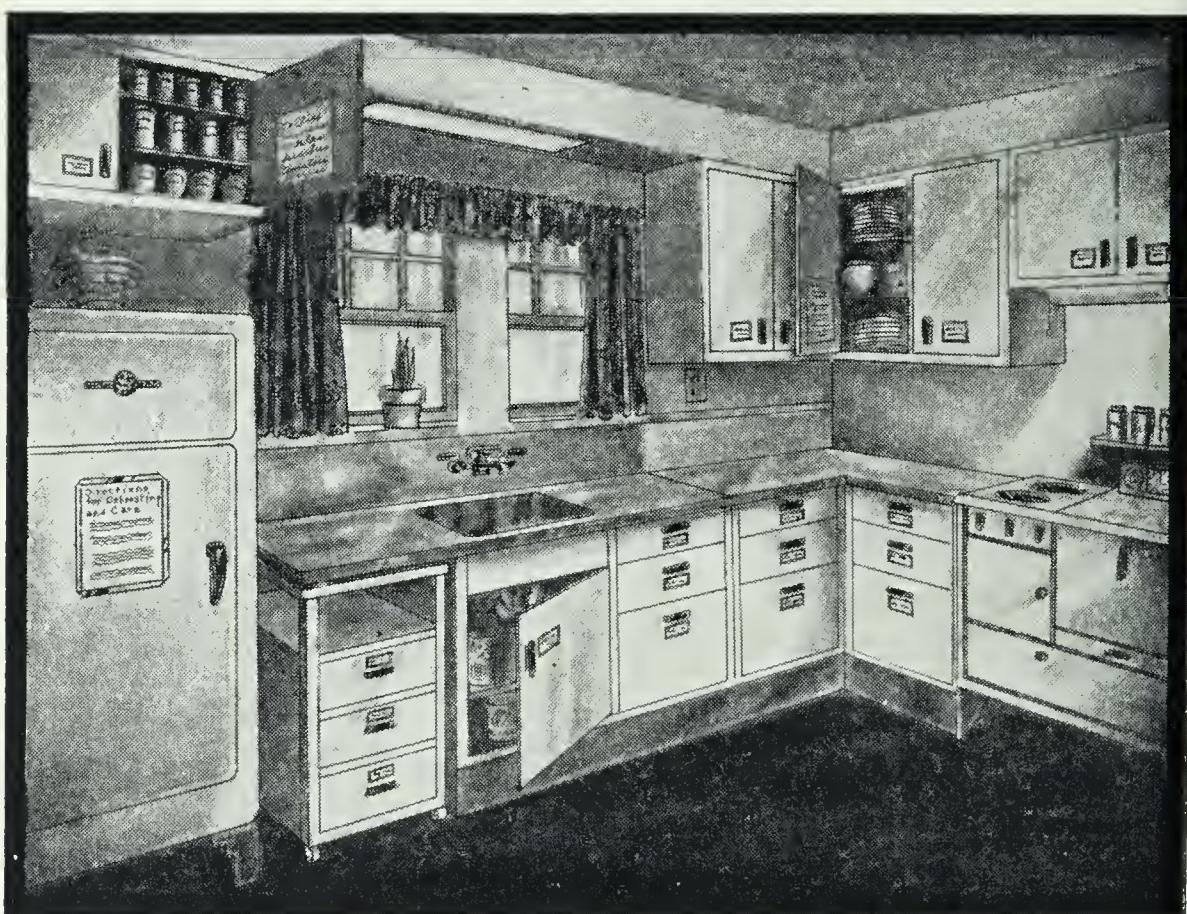


Fig. 12. Labeling of drawers and cabinets is an aid to order. The table with drawers and shelf under the sink drain board is on casters to facilitate moving about.

to make individuals irritable and hence harder to live with. Having enough room for people to avoid each other until they have had time to rest is frequently a means to harmony. Confusion irritates most persons, both young and old, whether they recognize the fact themselves or not. Order, cleanliness, and cheerfulness counteract the effects of disorder, dirt, and drabness.

Again many of the mechanical controls possible to homes

lift minor responsibilities, as for example the heat control of an electric iron or refrigerator, the clock and thermostatic control of a furnace or electric oven. The automatic safety switches on washing machines and wringers remove fear and offer protection from accidents at the same time.

Intelligent management finds relationships between cause and effect and arranges the environment to make life safer, healthier, more instructive, harmonious, constructive, and enjoyable. Good management must always be subject to change or such modification as is necessary when conditions change. The more thoroughly one knows housekeeping processes as means to better living and the relationships of cause and effect the more easy it should be to see how adjustments to changed conditions can be made.

#### SUGGESTIONS FOR STUDY

1.
  - a. Study your school laboratory or department apartment, and list the kinds of furniture, draperies, floors, windows, walls, and equipment and describe the kind of care needed for each.
  - b. Write directions for each job, being sure to put them in orderly steps as would best fit the situation of your particular laboratory.
  - c. Describe how well work should be done, that is, the standard that is acceptable, and show whether it is based upon sanitation or esthetic appeal.
2.
  - a. Make a work schedule for your laboratory that will insure that all jobs which can be done by members of the classes will be assigned in such a manner that every person has an opportunity to learn how each job should be done.
  - b. Make a list of questions for each job that will help the person responsible for the work to determine when it is done well. For example:  
Did you scrape and rinse dishes before stacking? Did you wash them in soapy water and rinse in clear hot water? Did you use clean dishcloths and towels? Do the dishes look and feel entirely free from all food? Did you stack them in orderly fashion and put them in a clean cupboard? Did you thoroughly wash your dishcloths and towels after use and did you hang them in a clean (pref-

erably sunny) place to dry, or Did you hang them to dry and then put them in the laundry?

3. Why make beds? Why sweep floors? Why wash windows? Why wash and sun bread containers? Why clean refrigerators?

4. a. Study the work of your home and list all the types of work done regardless of who does them.

b. Select from your list those that must be repeated daily. List those that need to be repeated once a week or oftener. Those that may be done on a seasonal schedule. Extras such as work attached to the care of ill members of the family, parties, etc.

5. Suppose you were assigned the responsibility of managing a luncheon for six to be served in the high-school department. Describe the considerations to be kept in mind when planning it and the kinds and order of work.

6. Imagine that you are to be the general housekeeper for the high-school laboratory during the next week. List the major responsibilities to be kept in mind when organizing plans for your work and describe details to be remembered in connection with each type of job.

7. How does the schedule of the Puerto Rican girl on a plantation differ from that of the Minnesota girl on a farm? The Puerto Rican town girl's schedule from the schedule of any one of the Texas girls? Which schedule would your own most nearly resemble?

#### REFERENCES

- BALDERSON, Ray L., *Housewifery* (Philadelphia, J. B. Lippincott and Co., 1936, Revised Edition).
- HERRINGTON, Evelyn M., *Homemaking* (New York, D. Appleton-Century Co., 1935).
- WOOD, Mildred W., LINDQUIST, Ruth, STUDLEY, Lucy A., *Managing the Home* (Boston, Houghton Mifflin Co., 1932).

## HISTORIC INFLUENCES

The following pictures include four that are faithful reproductions in miniature of historic pieces of furniture and furnishings. Because every detail is in perfect scale it is hard to realize that they are miniatures. See reference Chapter V. Other pictures show the influence of historic design in modern made furniture.



Courtesy of Marshall Field and Co.;  
Hedrich-Blessing, Photographers.

24. A unit.



Courtesy of Mrs. James Ward Thorne; Ralston-Hughes, Ph

25. Adam design with Thomas Sheraton furniture (1750-1806).



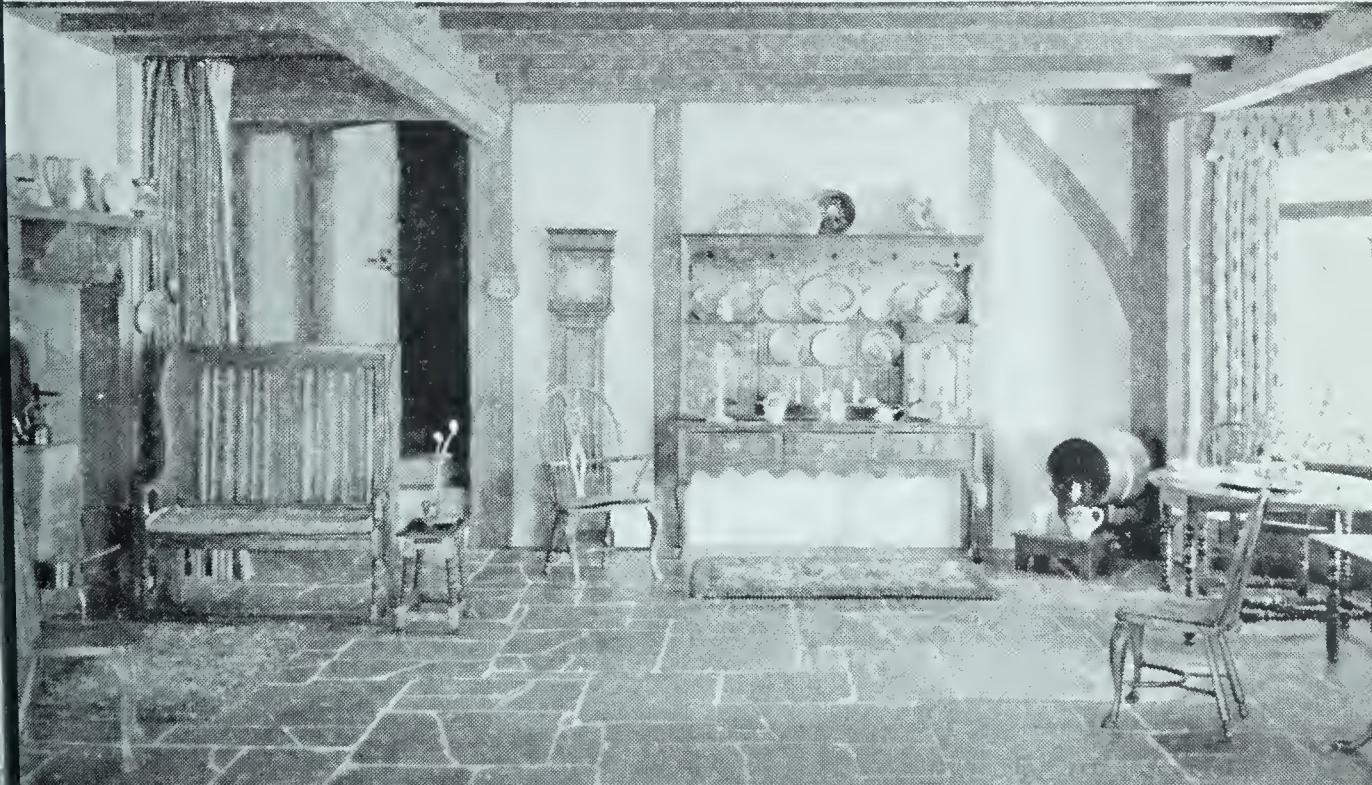
Courtesy of Mrs. James Ward Thorne; Ralston-Hughes, 108

26. Influence of history in modern English apartment.



Mrs. James Ward Thorne; Ralston-Hughes, Photographers.

27. Queen Anne library (1702-1714).



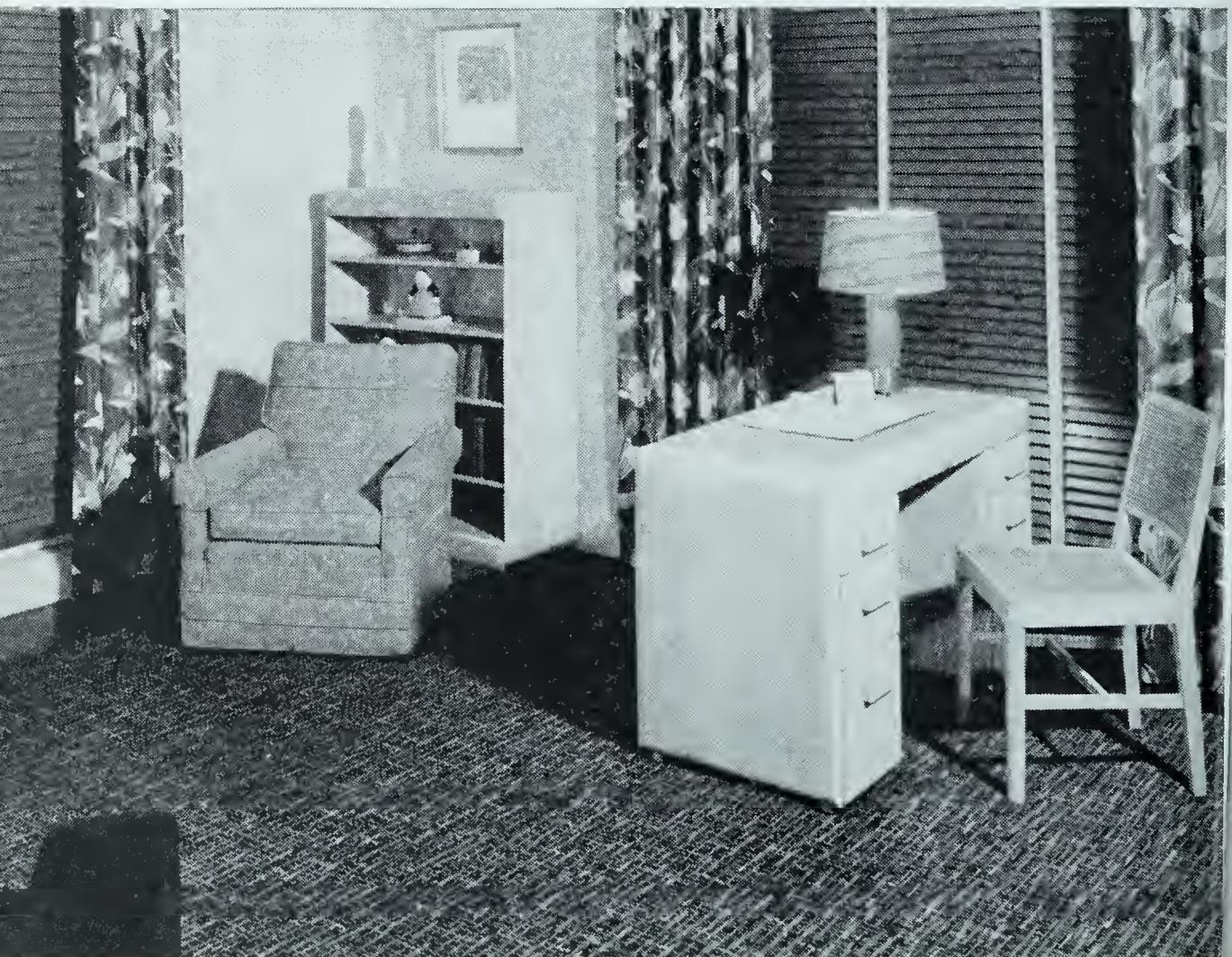
Mrs. James Ward Thorne; Ralston-Hughes, Photographers.

28. Interior of a Queen Anne cottage (1702-1714).



Courtesy of Nancy McClelland, Inc., Decorators.

29. Influence of past in richly furnished library.



Courtesy of Marshall Field and Co.; Hedrich-Blessing, Photographers.

30. Modern furnishing of a corner for reading and writing.



Courtesy of B. Altman and Co., Richard Garrison, Photographer.

*31. A regency bedroom in a modern setting.*



Courtesy of B. Altman and Co.; Emilie Danielson, Photographer.

*32. Eighteenth-century dining-room from Charleston, S. C.*



Photograph by Byron.

33. From the last century—what is wrong?



Courtesy of Marshall Field and Co.

34. From Ancient Greece to the present.



Hortense Reit, Decorator; Hans Groenhoff, Photographer.

35. Another modern living-room.



White and Weber, Architects; Hedrich-Blessing, Photographers.

36. Historical designs adapted to modern furniture.



Kaufmann-Fabry Photo

37. Costly bad taste.



Kaufmann-Fabry Photo

38. Inexpensive good taste.

## *FROM HOUSING PROJECTS*

*These pictures show houses that have been built, and the captions give a few of the considerations in planning them.*



*S. Arthur Love, Architect; Donald M. Love, Builder.*

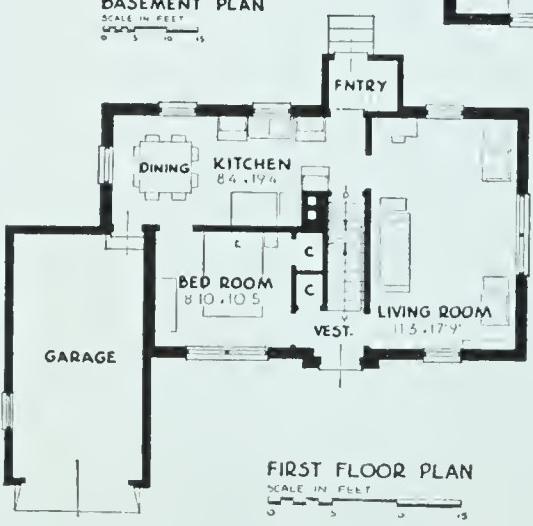
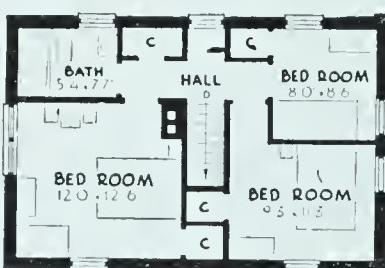
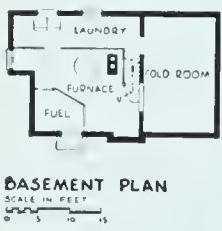
*39. A housing project gets under way.*



*Farm Security Administration, Resettlement Administration; Photograph by L.*  
40. Small house under construction.

A garden community for 200 low-income families, this project is under construction on 1,600 acres of fertile land in Gogebic County, Mich., near the town Ironwood. Bad housing conditions in Ironwood, an iron-mining town with a population of 14,000, were aggravated by the economic depression. Also a residential section of the town has been slowly sinking because of underground mining operations.

There will be 200 houses, two stories high, with four to six rooms, basements, and in most cases, garages. The basement has a large cold room. A central water system will supply all buildings. Each family will have a garden plot adjacent to its home. Cooperative facilities including a trade center, a cannery, dairy barns, hog shelters, and poultry houses are planned. Fencing, landscaping, walks, and driveways are provided.





sy of Scott Quentin, Architect.

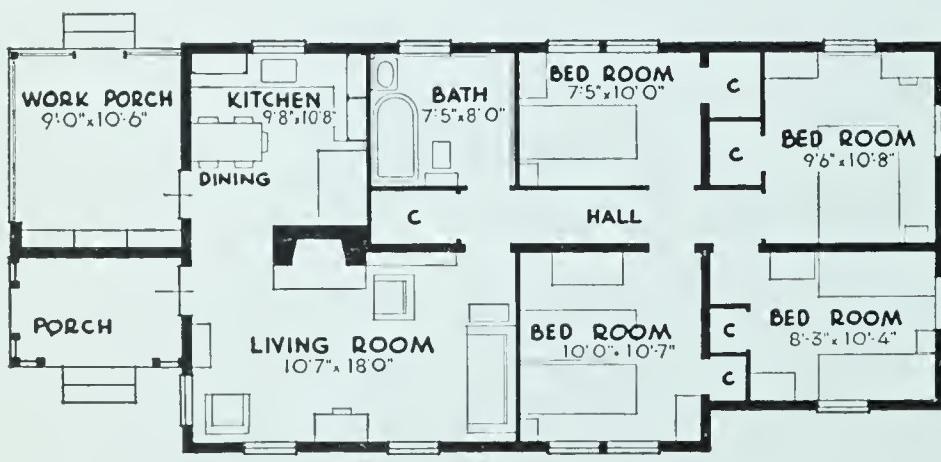
41. This building unit in Pasadena, California, in which small houses have common adjoining walls, was planned to give each home individuality and the benefits of the sunny climate.



Farm Security Administr

## 42. The Government builds a bungalow.

Penderlea Homesteads, located on the Coastal Plain, forty miles from the city of Wilmington, N. C., has been designed to give farmers in the poor land area around Wilmington an opportunity to relocate on land capable of providing them with a better way of living. This region is in the farm tenant belt. Occupant families were selected with this in mind. Approximately 4,500 acres have been purchased for the development of this project.



FLOOR PLAN

SCALE IN FEET

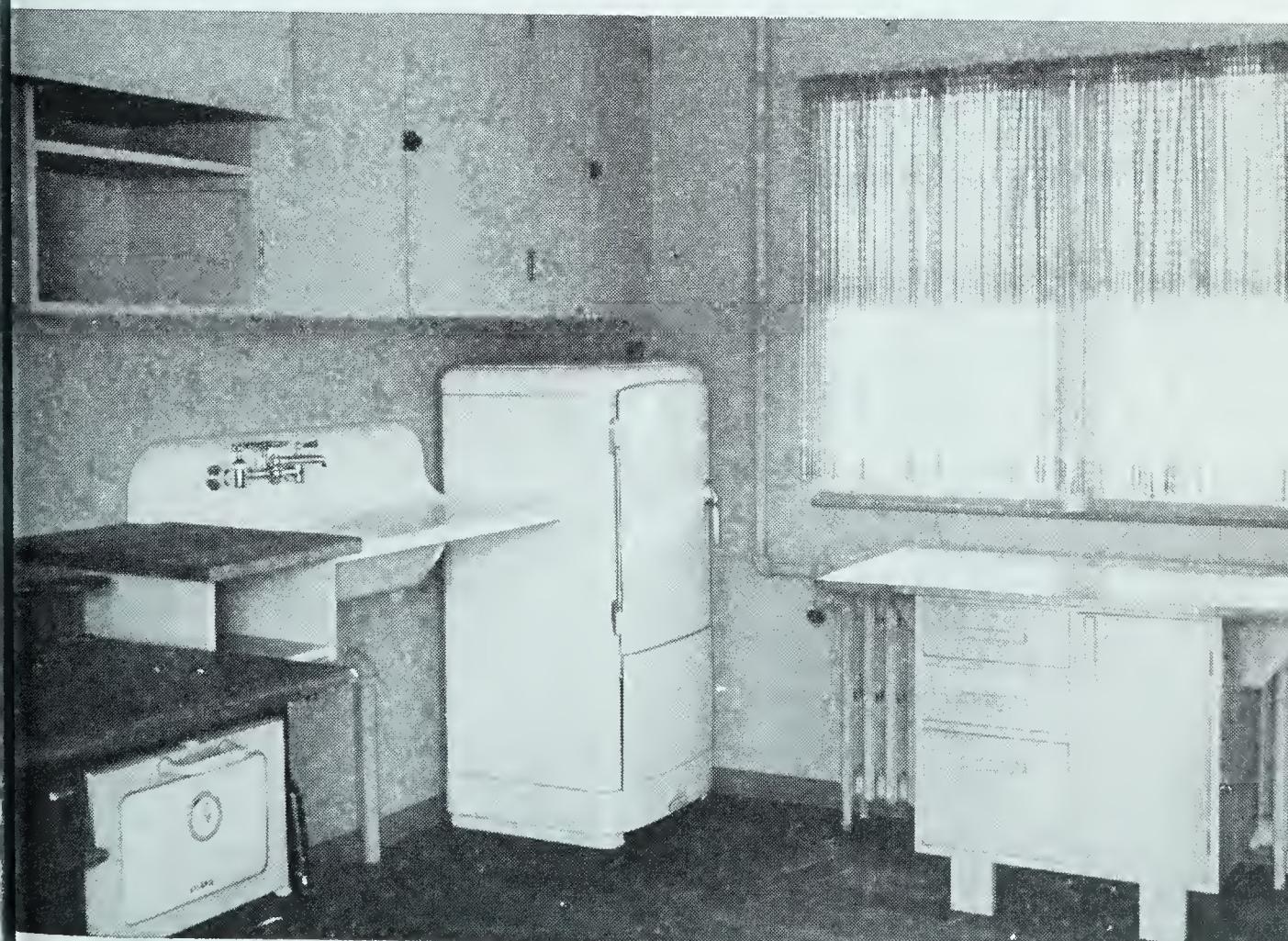
0 5 10 15

There are 142 farms housed in attractive five-, and six-room dwellings, one story in height. A tract of twenty acres each family has been cleared and made ready for the planting of crops. There is a chicken house, barn, a stable, hog house, and a house on each tract. Running water under pressure is furnished by electric power driven pumps from wells.



Farm Security Administration; Photo by Rothstein.

43. *A house for factory workers.*



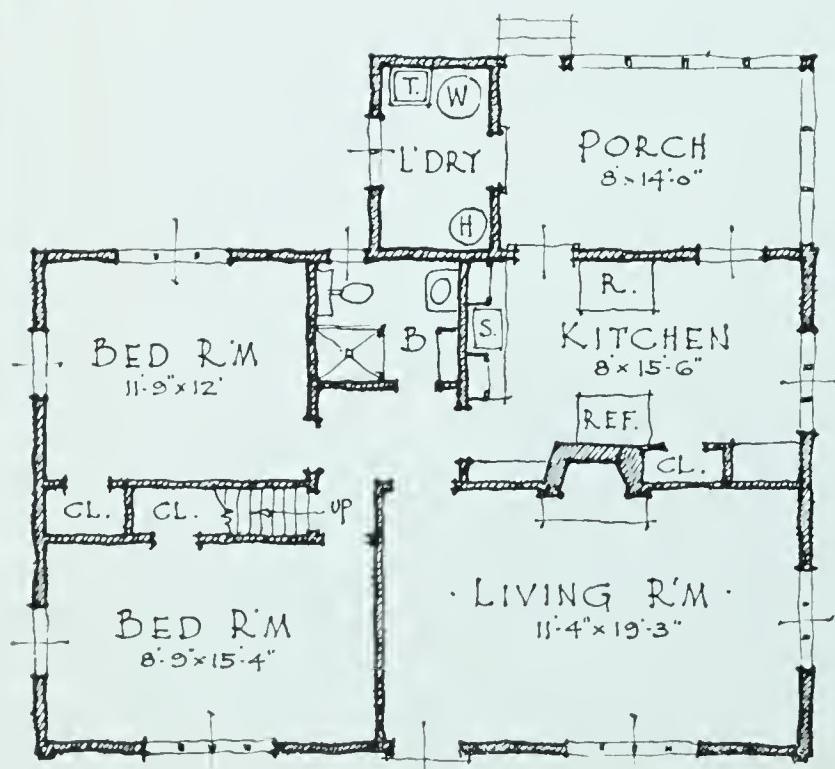
Farm Security Administration.

44. *A kitchen in a low-cost house.*



Resettlement Administra

45. Four-room house with a large attic.



Located at Norris, Tennessee where the climate is mild and electricity is cheap, these houses are electrically equipped and heated. Observe the compact and convenient arrangement of space. With no basement, laundry is above ground. The dining-room is eliminated, the bathroom is easily available to all rooms, and a large attic meets the demand for storage space.

## *THINGS TO NOTICE*

4. Beautiful grain of wood, mirror-like polish. Good proportions of chest. How lines made by candles unite picture and desk. See pp. 163-172.
5. The lightness, grace, and delicacy of Sheraton furniture designing. The difference in this respect between the furniture of this room and that of the Queen Anne cottage. See p. 202.
6. Relationship of height of windows and hanging of dark draperies to wall height, and height of chairs in this room as compared to those of Sheraton to understand why Modern English appears higher than Sheraton. Chinese influence in design of wooden chair backs and small ebony table. See p. 202.
7. Fine paneling of painted walls and door. Good proportion of fireplace, and beauty of simple outlining with marble. General shape of the Queen Anne chairs and settee, and curve of chair and table legs. Light for worker at desk comes over shoulder. The perfect scale of every detail in these miniature rooms that makes them seem large. See pp. 194, 196, 202.
8. Miniature rooms all reproduce a period of furniture design and room decoration. They are seen as a diorama or picture. The balance of fireplace with seat and window. Design and effect of beamed ceiling, plaster and half-timber walls characteristic of such houses as Anne Hathaway's cottage. Interesting design of stone floor. See p. 202.
9. Hepplewhite influence in chair shape and back design. Decorative value of view through uncurtained leadedglass windows. Rich texture of hand-blocked linen draperies. Better placing of desk in Queen Anne library. See pp. 194, 196.
10. Contrast of draperies in bold design against plain wall and Venetian window blind and with undecorated modern furniture. Bookcase would look better filled with books than with bric-a-brac. See p. 197.
11. Influence of Duncan Phyfe curves in designing of chair backs and legs. Relationship to earlier English influence of Sheraton. See pp. 133, 184, 194.
12. Symmetrical balance. Formal arrangement. Grace and dignity. Characteristic Phyfe table legs are almost concealed. See pp. 133, 184, 194.

33. What is bad in the choice of furniture and decoration of this room? What could be done to improve it?
34. How are rugs used in very large room as basis for unit of furniture arrangement? Design made by dentals in molding. Dado at base of wall. Refined and simple treatment of molding in arched doorway. See p. 16.
35. Shapes used are geometric, strong conventionalized painting on plain wall becomes a center of interest. Contrast of deep folds of heavy drapery at window. See pp. 197, 199.
36. That wall treatment and decoration of fireplace show designer has studied rooms such as the Adam. The modern upholstered wing chair related in general shape and leg design to chairs of Queen Anne's reign. The glass-top coffee table shows Chinese influence in general shape and open wood design at top. Influence of Duncan Phyfe in small table and window. See chairs and table, Modern English room.
37. Bad designing. Dog-eared flaps of bedspread with ungraceful bow knot. Would-be pictures hung too high. Bad proportion of shades on chandelier. Misguided use of historic designs.
38. Good use of inherited chair, desk, and dresser. Well-chosen inexpensive new beds, rag rugs, and net curtains. Arrangement of rugs and placement of furniture in small room. See p. 53.
43. This is an agricultural-industrial community near Hightstown, New Jersey. The 200 families selected for occupancy are needle trades workers from the New York and Philadelphia areas who have suffered as a result of seasonal unemployment. The families coöperatively manufacture women's garments and operate a 414-acre farm. In addition they will have their own coöperative stores and shops, a community center, and other necessary service trades.  
The homes are grouped in horseshoe formation with the community buildings in the center. There are four-, five-, six-, and seven-room houses all one story in height.

## 7

## THE SELECTION OF MATERIALS FOR HOUSEHOLD USE

"Know your materials" is familiar advice to artisans, and it might be extended to home managers. Knowing implies a kind of familiarity that results from reading about, handling, and working with them. Real understanding comes not alone from gathering information or superficially observing, but from trying to use. Much of what you are about to read deals with materials that you know well or in part, and the pages that follow suggest ways of increasing your range of familiar materials.

1. Think of a house familiar to you and list the different kinds of furnishings in it.
2. Take magazines, newspapers, commercial catalogues and list the kinds of furniture, equipment, draperies, curtains, shades, wall coverings, floor coverings, bedding, table and kitchen linens, laundry and bathroom equipment, recreational supplies, etc., that you find. How much do you know about the qualities each possesses?
3. What is the chief purpose of each article?
4. How many household articles are labeled? What kind of information does each label give about the product?



When you have tried to enumerate merely the different kinds of materials used in furnishing a house you will realize that there is almost limitless variety. If you had the problem of fully furnishing either a school apartment or house as is sometimes needed in high-school home economics departments, you would again see what a varied type of infor-

mation is needed to purchase intelligently. There would be furniture; equipment, both large and small ranging from a washing machine down to a paring knife; all the textile materials, including linoleum which has a textile base; china, glass, metals, paints, varnish and other surfacing materials. No end of questions would arise if you attempted to select for permanent as well as temporary attractiveness and use. And you might be amazed to learn the ways and extent to which once lovely articles can deteriorate.

#### TEXTILES

**Values and quality.** Towels and wash cloths are essential to every one in all homes. Many of the general considerations applicable to them apply to other household textiles as well. First, what qualities does one most want in each of the different items of household furnishing? In the case of bath towels their chief function is absorption of moisture, hence the fiber and construction that best takes up moisture will be most satisfactory. Loosely constructed terry weave towels serve this purpose best, but being loose and sleazy they wear out too quickly for economy; hence there must be a compromise with more firmly made towels which fortunately usually have a better appearance also.

But you ask why are some towels sleazy and others firm? The difference lies in the way they are woven. Terry cloth has loops over the surface because part of the warp yarns are brought up on both the face and reverse side during the weaving process. The other warp yarns with the filling or woof are taut as in flat, plain-weave fabrics. The extra loops of yarn over the surface increase the capacity of the towel to take up moisture, but unless the taut yarns are close enough to hold the loops firmly the loops easily catch and pull out of place. The question is to know how firm a construction is best for both absorption and wear.

Unfortunately there are no guides in the form of labels that



*Courtesy of Marshall Field and Company.*

Fig. 1. Large firm bath towels, washcloth, and bath mats.

describe the size and number of warp and woof yarns per square inch or even tell about how many washings they should stand before the yarns weaken, break, and the towel is worn out. One must judge of all this by feeling and examining the new towel. It is easy to find very sleazy and usually inexpensive towels as well as thick, firm ones, and grades midway between. If the samples selected have borders and you have a

magnifying glass, it is possible to see, at the line where the loops are discontinued and the plain weave of the border strip begins, how the loops have been thrown up over the surface. See Figure 2. Furthermore, you can count the loops to see how many more per inch are used in the towel of close construction. Without a magnifying glass you can hold the fabric up to the light and thus see that definite differences exist. By pulling on loops you can get some notion of how loosely or tightly they are held by the foundation yarns.

When using bath towels of loose and firm construction you can feel differences too. Some take up skin moisture well, are comfortably large without being heavy, and firm enough of weave so they are not stringy while used on the body.

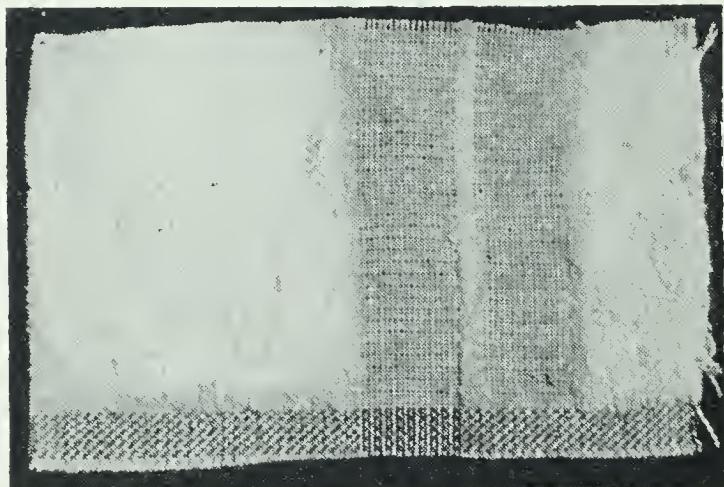
Note the sizes shown in Figure 1. The practical questions, when buying are, how thick and firm should a towel be to wear longest and yet be efficient for drying. What can you afford?

#### Fiber qualities.

The fiber qualities. The

lasting qualities of towels, like sheets, table linens, curtains, and other household fabrics depend upon both fibers and construction, as well as the kind of care given them while in use. Because fibers are tiny, they escape observation, and we often fail to realize that we could not have these desirable qualities in the finished fabrics except for the distinctive qualities of the fibers from which they are made.

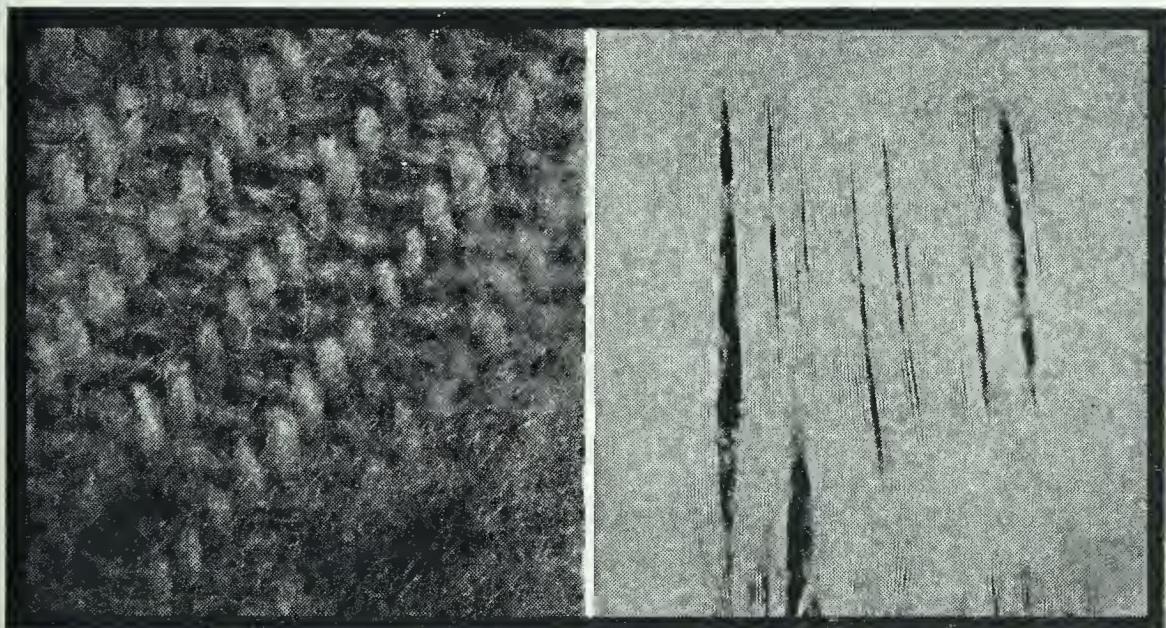
**Wool.** There is, for example, no true substitute for wool in a blanket though cotton is used to some extent in imitation of it. Only the wool fiber is wiry, resilient, and capable of locking with others into a fluffy, napped surface on woven fabrics or into a loosely clinging bat of fibers, for the filling of a bed



Courtesy U. S. Dept. of Agriculture.

Fig. 2. The two broad stripes show the base of the towel since the warp yarns used for loops have been drawn.

comfortable. The capacity that wool has for locking and matting is the result of the way the fiber grows. It has often been likened to a thin pine cone with protruding barbs that interlock. Much use is made of this characteristic in fabric manufacture to produce a light-weight fabric capable of holding air. This uncirculating air becomes an insulation, which used as a blanket, prevents body heat from being lost quickly. Thus the warmest blankets are the fluffiest. They may not be the most durable, however.



*Courtesy of the Department of Research and Textiles, American Institute of Laundering.*

**Fig. 3. Wearing quality of blankets.**

In the blanket at the left the nap is worn away and shows from the base or construction. The yarns are well-twisted and strong. The blanket on the right shows weak wool filling.

But the wool fiber shows its qualities in other household fabrics, particularly rugs and carpets, upholstery fabrics, some furniture cover fabrics, and casement cloth that is occasionally made of wool. Here warmth is not the most desired quality. Resiliency or resistance to crushing and creasing are needed. The yarns, instead of being napped as for blankets, are tightly twisted, hard, and wiry. Uncut Brussels carpet, which is made of hard wool yarns with loops on the face similar to terry toweling loops, has long been recognized for its superior wearing qualities. Wool fabrics of like construction but lighter in

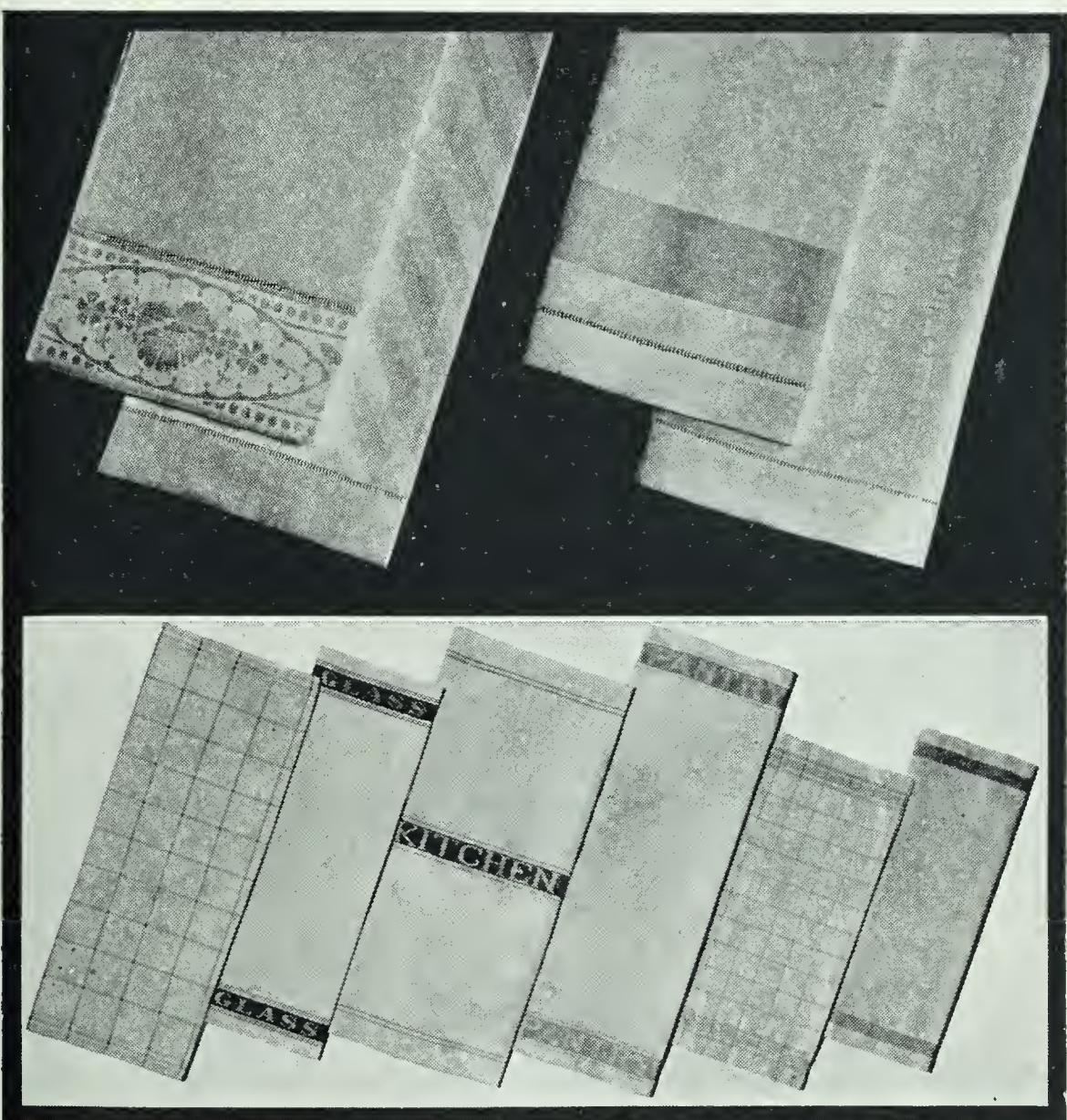
weight are standard hard-wear upholstery fabrics. When made of wool and left uncut, these loops are harsh to the touch which is a disadvantage for furniture covering. When cut, the loops make a softer velvet-like surface which in upholstery velours is suitable for hard wear. In general the advantage of wool for furniture covers is that it does not wrinkle as badly as linen or cotton, wears better, and is commonly less costly than silk. In some cases it is also less costly than rayon.

**Cotton.** Though wool has distinctive qualities and wide use in household furnishings, cotton is the inexpensive fiber found in all types of furnishings even to the backs of wool carpets and the unnapped base of many blankets that pass for wool. Its cheapness and launderability make it advantageous for the widest number of homes. Cotton is an excellent textile also from a hygienic point of view, for it can be washed with boiling. Towels of all varieties, glass curtains, draperies, sheets, pillow cases, bed spreads, some table covers, cotton blankets, the backs of wool rugs, and the nap also of cotton rugs show the extensiveness of cotton in household fabrics.

**Linen.** Linen, once more widely used, is now confined largely to table use, hand towels, glass toweling, and expensive sheets and pillow cases. A few hand-blocked draperies and furniture cover fabrics are also made of linen, but because of its cost and tendency to crush it has lost ground to cotton and other fibers. For beauty linen has never been surpassed in table covers since up to the point of disuse where the yarns break and the fabric is worn out its luster comes back with each ironing. See Figures 19 and 20 at end of chapter for examples of fine satin damask. Because of its great capacity for absorbing moisture a few costly bath towels in terry construction are made of linen, and linen glass toweling is a standard in the market. Linen toweling is desirable for wiping glasses because linen fibers are longer than cotton; hence they make less fuzzy yarns and consequently less liny fabrics. When badly worn, however, the fibers in linen fabrics are broken and may leave lint.

**Silk and rayon.** Silk is too costly to find wide use in household fabrics, and where the appearance of silk is desired rayon

has been substituted. Pongee is true silk but except for curtains it is little used as a household fabric. Where laundering is not so frequent, synthetic fibers (rayons, celanese) serve well, but when used to substitute for linen in table cloths they



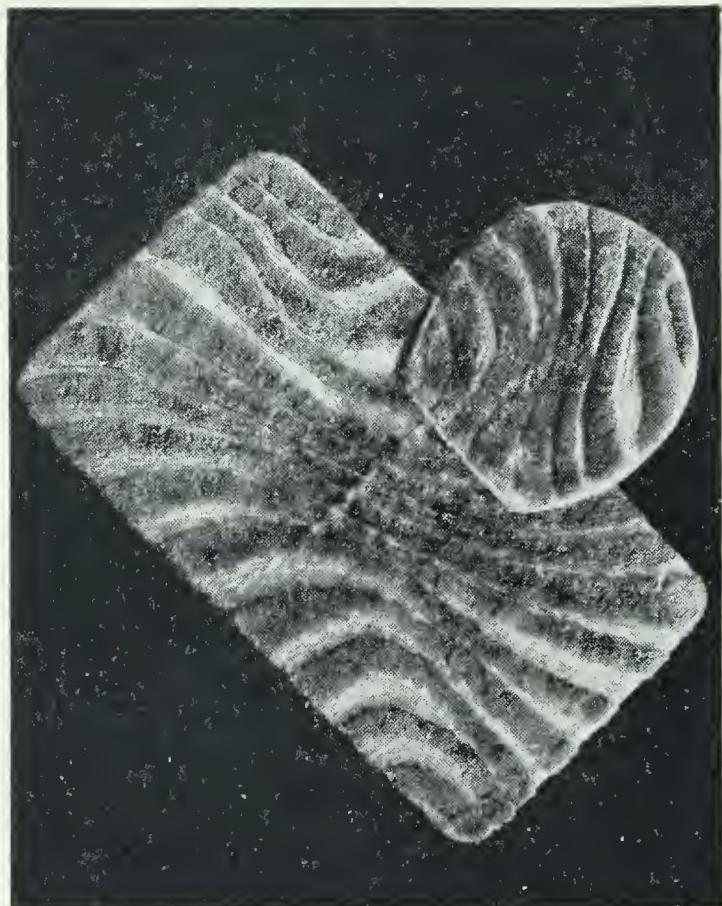
*Courtesy of Marshall Field and Company.*

Fig. 4. Linen toweling.

Linen hand towels in a variation of sizes are shown at the top. Linen kitchen and glass towels are shown in the lower picture.

are often highly disappointing. The new heavy satiny appearance while in the store may change to fuzziness if the rayon yarns soften and break with laundering. See Figure 13, page 193.

Fibers are mixed in both spinning and weaving processes. The fiber or fibers of which household fabrics are constructed contribute definite qualities, but the way they are constructed into fabrics also determines what satisfactions the buyer will get during use. Few if any labels answer questions that intelligent buyers might want to know; hence one must develop powers of observation and tests that can be used in homes. Many reliable merchants do not know how the merchandise they sell was made, nor can they tell exactly how it will wear, but some do give information to the best of their knowledge and make replacements when articles fail to give reasonable service.



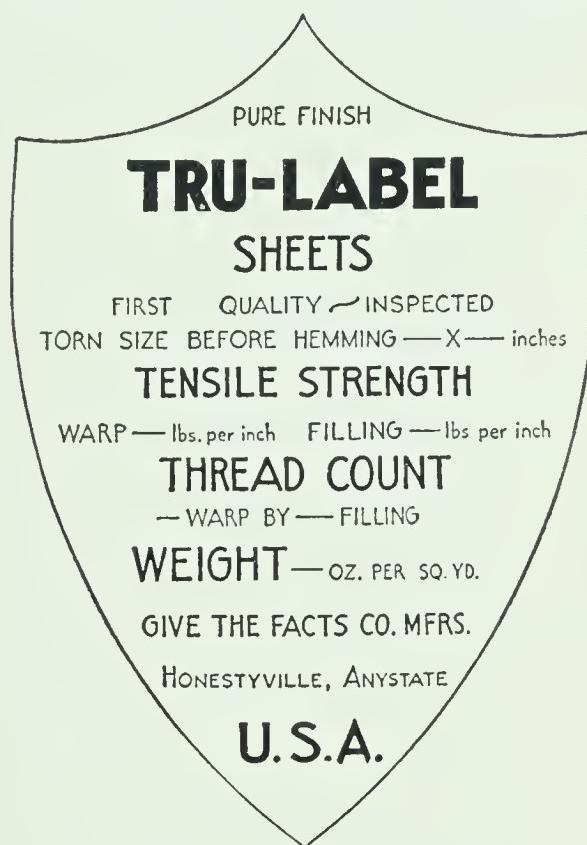
*Courtesy of Marshall Field and Company.*

Fig. 5. Rayon pile bath mat and seat cover.

Reasonable is, of course, loose in meaning and depends upon what the merchant thinks. Many manufacturers take pride in establishing a desirable standard for all the articles on which they place a trade name. A few guarantee to replace an article if it does not last as specified. In this sense labels serve as guides to buying, but a vast quantity of both textiles and furniture is sold without descriptive labels. The problem is then one of the buyer's judgment. Judgment comes from discussing possible values, examining different products, using them, and comparing. The reading of this text gives you a beginning for discussion and observation. Use and comparison may go on for years.

**Mixing of fibers.** As you probably realize, many fabrics are made of combinations of textile fibers. Some fibers are mixed when yarns are spun, others are mixed by using yarns of one type for the warp or lengthwise yarns and another for the fillers known as woof or weft. Cotton and linen are often distressingly combined from the purchaser's point of view. The glossy, good looking "linen" table cloth of the store not infrequently washes fuzzy and "cottony." It lacks the characteristic linen luster and the soft leathery weightiness of true linen, for instead of having been made of linen fibers it was made of cotton and "finished" to look like linen.

Cotton may be mixed with wool in blankets to the extent of 90 per cent or more. After washing, the largely cotton blanket will flatten and mat, as cotton, thus giving less warmth for its weight. Then too, the methods good for laundering cotton are hard on wool. Cotton may be washed in soiling suds, whereas this treatment makes wool shrink and pack together somewhat like a felt hat. Silk, when mixed with cotton and washed as cotton, turns yellow and breaks before cotton. Though fiber mixtures may serve certain purposes satisfactorily, it is important that buyers should know that they are getting mixtures and thus be prepared to take care of them as mixtures. If you could have the laboratory or home experience of laundering a new cotton napkin that is finished to look like linen, one that is a mixture of more cotton than linen, and a fine all-linen satin damask, these differences would become



*Courtesy of the U. S. Department of Agriculture.*

Fig. 6. An ideal label gives facts about the sheet.

very real. Also if you could wash by boiling pieces of cotton blankets, a mixture of cotton and wool, as well as all wool, you would see why it is important to know what fibers are used in making the fabrics that home-makers must keep in good condition.

By feel you can quickly sense the difference between an all-cotton blanket and one of all wool, but when the fibers are

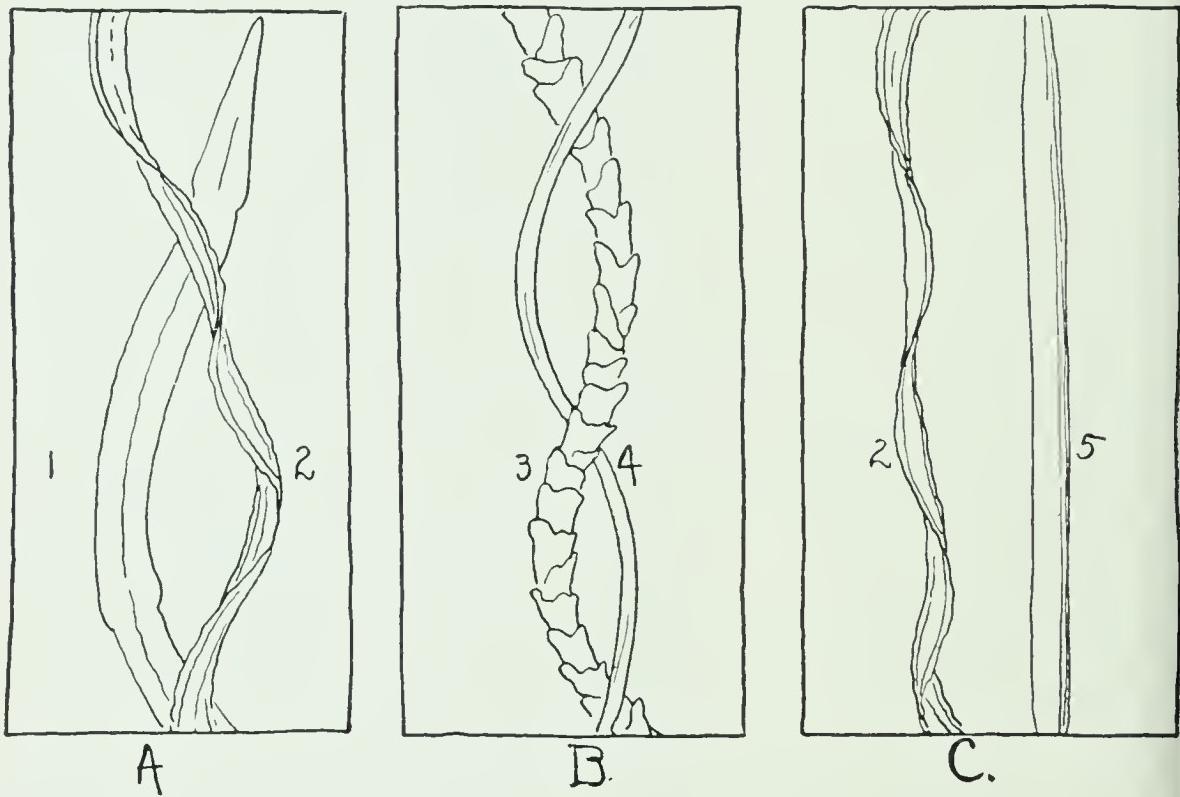


Fig. 7. Various fibers greatly enlarged.

A. 1, Linen; 2, cotton. B. 3, wool; 4, silk. C. 5, mercerized cotton.

mixed in a blanket, feel is a poor guide. Then it is necessary to ravel the fabric to see whether yarns of one fiber were used for warp and of another for woof. Burning yarns from one end will give some notion as to their composition. Wool yarns will burn slowly as hair and give a bad odor, and a hard, dark, crusty ball of ash. Cotton will burn rapidly as paper with a somewhat pleasant odor and a filmy white ash. Now silk also burns much as wool, but burning is not needed to distinguish it from wool. Feel and appearance are usually enough. Silk and rayon, however, are so much alike in appearance that other means are needed to distinguish them. Celanese makes an ash

that can be easily confused with that of silk. It dissolves in acetone whereas silk does not. Other synthetic fibers burn rapidly, more like cotton. Linen and cotton burn so much alike that ordinarily one could not rely upon burning even as an indication of a cotton and linen mixture. The most reliable means of distinguishing linen from cotton is to ravel the yarn and examine the fibers under a microscope. Some mixtures can be distinguished with a good hand lens that magnifies the fibers in the fabric. See Figure 7.

After linens and cottons have been washed, to remove starch or other dressing materials, a drop of water (or ink if used on a sample) will be absorbed quickly and hence spread faster on linen than cotton. It leaves a spot with a round edge on linen; on samples of fabrics of mixed cotton and linen yarns an ink stain will show the mixture by a difference in rate of absorption. The ink will flow farther out on the linen yarns thus making a spot with an uneven edge. It is evident then that appearance, feel, and burning are not sufficient to identify the kinds of fibers used in the manufacture of fabrics.

Just as the microscope aids in finding bacteria by opening a whole world not visible to the naked eye, so the microscope opens the door to a new world in textiles, for fibers are so different under the microscope that with experience one can develop accurate judgment. The diagrams of Figure 7 show you essential differences between fibers. Experience in examining fibers elaborates the difference shown in these diagrams.

To the average home-maker there would be little reason beyond pure curiosity for discovering the composition of fabrics, were it not for the use to be made of them and the care given. Even the home-maker who sends her laundry and cleaning out to be done needs judgment as to whether an article should go to the laundry or dry cleaners. The greater number who do laundry work at home must have a basis for judging the best method of washing in relation to wear.

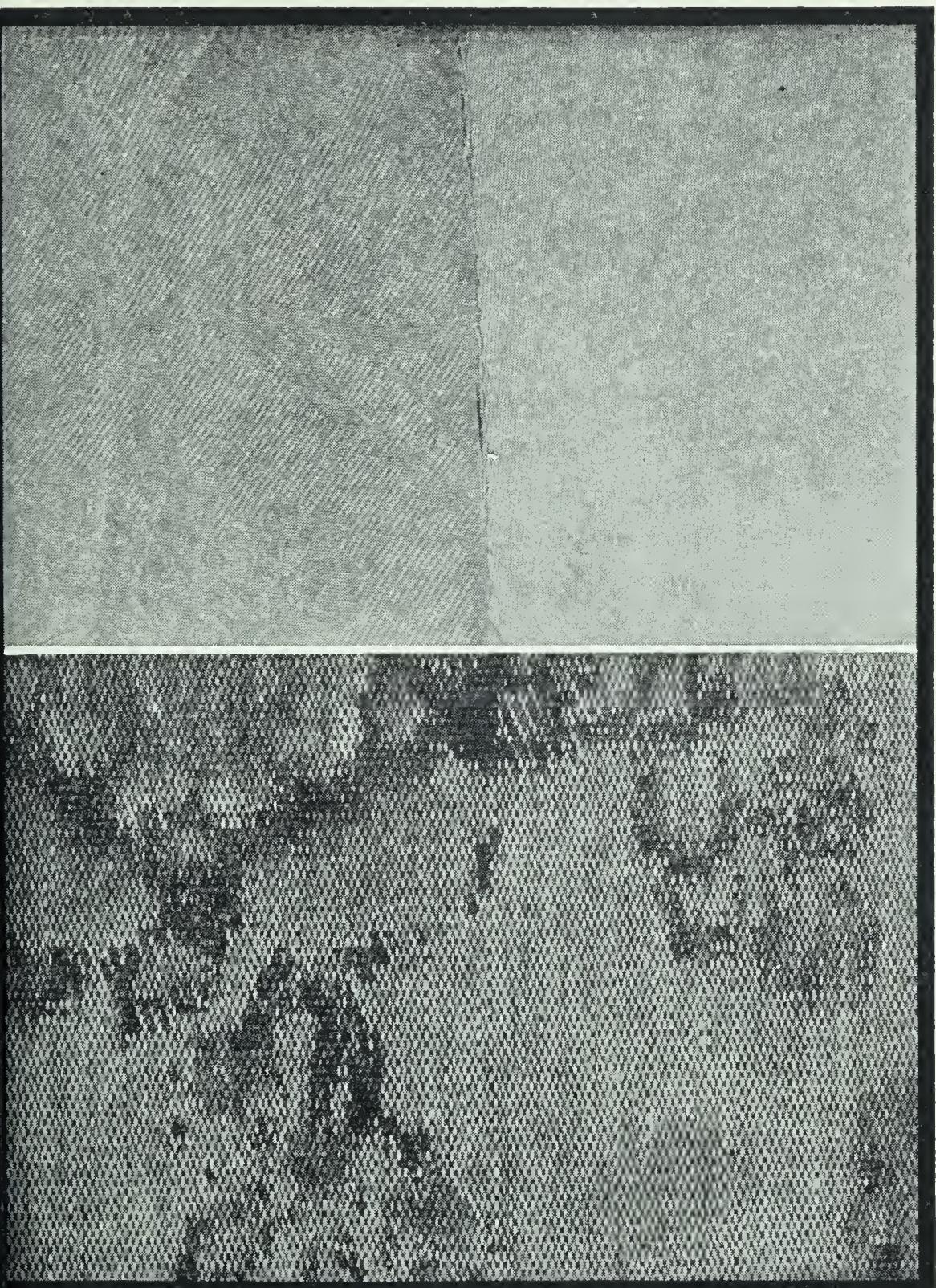
Perhaps because consumers have been willing to pay more for some textiles than others there has been a tendency to avoid labeling and to make combinations and substitutions.

With fine mercerized cottons, as beautiful and often more costly than rayons or heavily weighted silks, the time may come when honest labeling can be widely practised.

**Effects of finishing.** Spinning fibers into yarns and interlacing warp and woof yarns by different weaving patterns into fabrics are but part of the manufacturing process. Finishing adds materials in the form of dyes, starch, glue, wax, clay, iron or tin salts, in such a manner as to change the appearance of the woven cloth. Then also finishing processes such as stretching, calendering, and napping further alter it. Without finishing, much of the beauty in fabrics could not exist. But in finishing, as in constructing, there can be honesty and good practice or deceit. Weighted silk, which is universally found, is one illustration.

Pongee, a silk noted for long wear, is pure silk. It is not weighted with metallic salts. A yarn of pongee burns into the characteristic hard ash of silk. Heavily weighted drapery taffeta, ribbons, some silk stockings, etc., are also silk, but silk plus much tin or iron in the form of a metallic salt. These weighted silks do not curl into a ball when burned. Rather they retain their weaving pattern or knit shape. The ash of a plain weave such as taffeta looks like a fine screen but collapses with touching. The more heavily weighted the fabric the clearer the test for only the silk fiber burns. The metallic salt or weighting material that was soaked into the yarn remains unburned. Weighting is put into the fabric by soaking hanks of yarn or sleazily woven silk fabric in a metallic salt solution. The solution thus dried into the yarns makes them look and weigh heavier.

About 16 to 20 per cent of weighting can be used to replace a natural silk gum, sericin, that is washed out during the process of manufacture without seriously affecting the wearing qualities of the fabric. When, however, silk is weighted to as much as 400 per cent, only a little of silk fiber is carrying a tremendous load of iron or tin salt, and it is not surprising that taffeta and other heavily weighted silk fabrics split at folds. When we realize that pure silk is literally worth its weight in



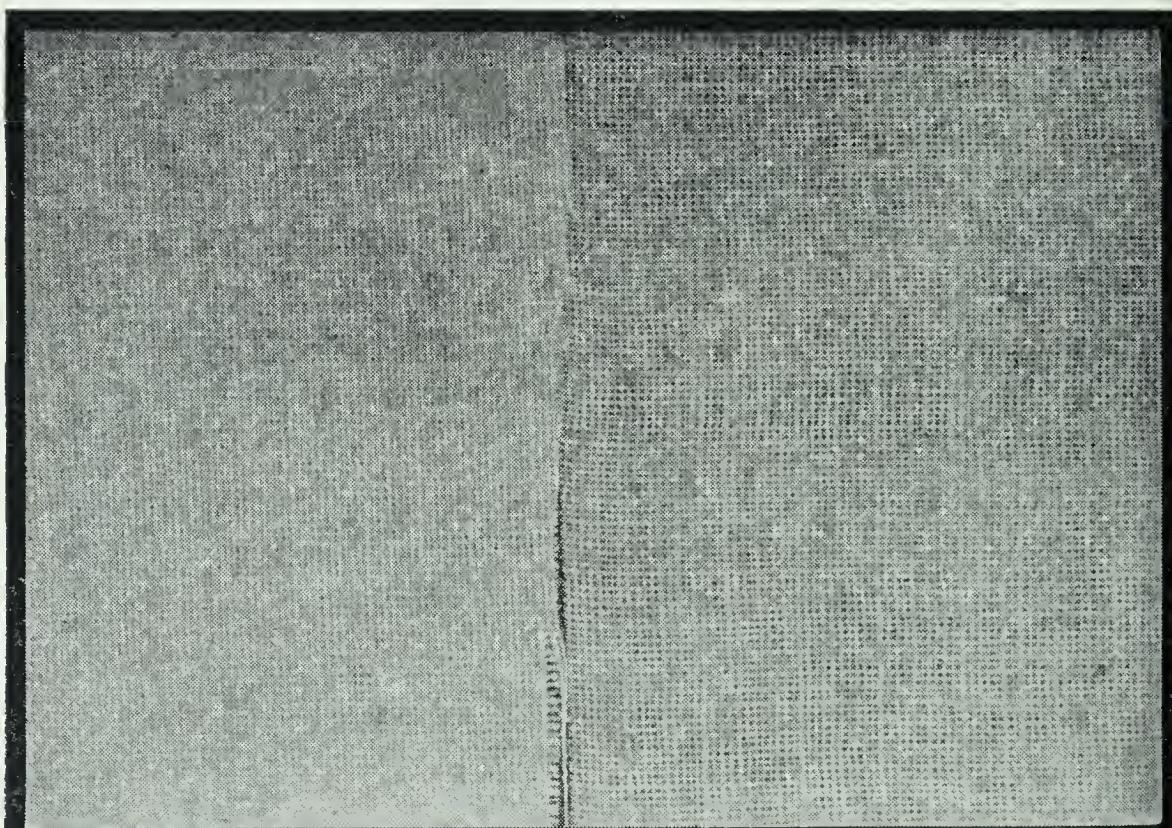
*Courtesy of the Department of Research and Textiles, American Institute of Laundering.*

**Fig. 8. Types of defects in textiles.**

Above, an embossed table cloth which lost its pattern after washing.  
Below, imitation tapestry in which the pattern areas were lost in cleaning.

gold, it is easy to understand the money advantage of substituting as much iron or tin as possible for silk.

Strange as it may seem, this process of substitution of a cheaper material for a fiber is used also on some cottons. Though cotton is a cheap fiber, clay, chalk, and other filling materials are even cheaper and hence are added sometimes to sleazy cotton sheeting or other cheap cotton fabrics. Cheap cotton table covers often have a quantity of dressing. After



*Courtesy of the Department of Research and Textiles, American Institute of Laundering.*

Fig. 9. Sizing in sheeting.

Left-hand piece has sizing to fill spaces between yarns. In right-hand piece sizing has been washed out.

washing this is lost, leaving the thin, poor original fabric that quickly wears out. During use on beds, sleazy sheets wrinkle and may cause much discomfort to those who try to sleep on them.

The glossy appearance of fabrics such as glazed chintz, like the glossy appearance of starched, laundered garments, results from calendering, a finishing process similar to starching and ironing. With washing it comes out. Mercerizing such as

is found in good quality English broadcloth and some cotton drapery fabrics gives the appearance and feel of silk. Even the scoop or sound of heavy, soft silk is found in some qualities. Mercerizing results from a chemical process that makes the cotton fiber full and round like silk instead of flat and twisted; hence the appearance given by mercerizing does not wash out. Good mercerized cotton household fabrics are often as beautiful as silk and have the advantage of laundering better and lasting much longer than any but the most costly unweighted silks.

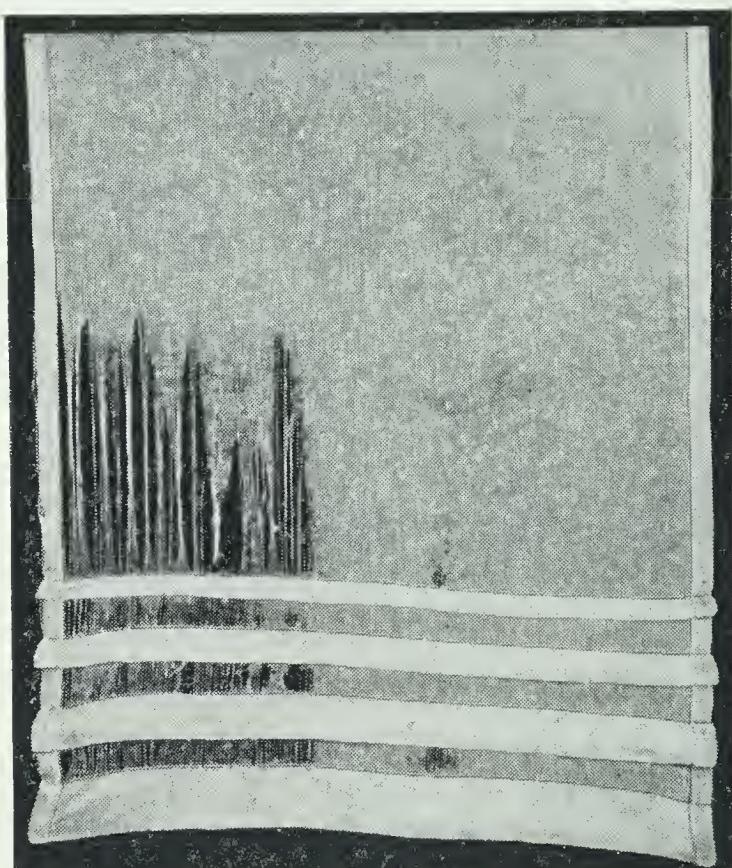
There are, of course, a very large number of fabric changes effected through the kind of finish given. Some are detrimental; others are harmless or beneficial. The difficult practical problem is to distinguish in the case of each article that one purchases. School cannot give you experience with all types of textiles but it can help you to get a start in observing.

**Color.** Color has been omitted so far because most of us see color and have our preferences. Too often the original color of an article is our sole reason for choice. How long it will last or under what conditions is the next question. There are three main color considerations for those who buy hoping to enjoy color as long as the article is used: (1) Will it fade with washing or dry cleaning? (2) Will it fade in sunlight? (3) Will it rock or rub off on hands or clothes? This third can be tested by rubbing with the hands or a white cloth. One does not commonly refer to the loss of newspaper ink as crocking; yet this loss of ink and dirtying of skin or fabric as a result of rubbing off shows the process clearly.

Fading, or loss of color with washing, can be tested by dividing a sample of the new fabric into halves and washing one under the conditions necessary to clean the fabric if it were dirty. By comparing it with the original, you can see how much fading to expect from one washing. If considerable money is to be put into draperies or other washable fabrics, it is well before purchasing to test the sample with a number of washings.

So also one can use samples to test sun fading. By cutting

three or more pieces, one can be laid away between the leaves of a book or in a drawer while the others are permitted to lie day after day in direct sunlight. Dark days should not be counted. At the end of a week one of the exposed samples can be labeled and put with the original; at the end of a second week the next sample; and so on until you have tested for as many weeks of fading as you wish. Before spending a large sum for colored household fabrics it would be well to buy a fourth-yard sample to use for testing.



*Courtesy of the Department of Research and Textiles,  
American Institute of Laundering.*

Fig. 10. Cotton curtain attacked by sunlight.

of the warp should be indicated with a tiny notch or a drawn yarn. By washing, pressing, and again measuring both with the warp and woof yarns it is easy to determine how much shrinkage to expect in each direction.

**Grading.** Before fabrics leave the textile mill, they are inspected for flaws of weaving, defects in dyeing, faulty matching of design patterns in printed fabrics, tearing from machinery hooks, accidental spotting, and many other imperfec-

From such a sample it would be possible also to test for shrinking. This is very important in curtains where the shrinking may make them useless unless allowance has been made. With a nine-inch or fourth-yard length of the fabric, a quarter-yard square can be cut. Threads should be drawn and measurements taken accurately. The direction

tions that result during manufacture. Perfect materials are put out as first quality or standard. Those with defects may be marketed as seconds. By looking over the surface of fabrics, color and pattern imperfections can usually be found. Weaving flaws, such as the one shown in Figure 11, may also be large enough to see quickly. But some broken yarns have no loose ends and can be found only with careful searching. Holding fabrics to the light often reveals flaws unobservable as the fabric lies wound over other thicknesses on the bolt.

Uneven tension in weaving yarns causes flaws that do not show until after the fabric is laundered. Then borders or bands in towels, stripes through table cloths and so forth, shrink and cause the rest of the fabric to pucker. This puckering can never be ironed out, and stretching would break the shrunken yarns. Another defect common to printed fabrics is mismatching of designs and blurred places. When fabrics are not printed true with weaving yarns and the fabric is cut rather than torn for making draperies or other furnishings, much difficulty results after laundering, for they never can be ironed with straight bottom and top edges. The curtain always looks twisted and uneven.

Rugs and carpets are subject to shrinking also and often lose

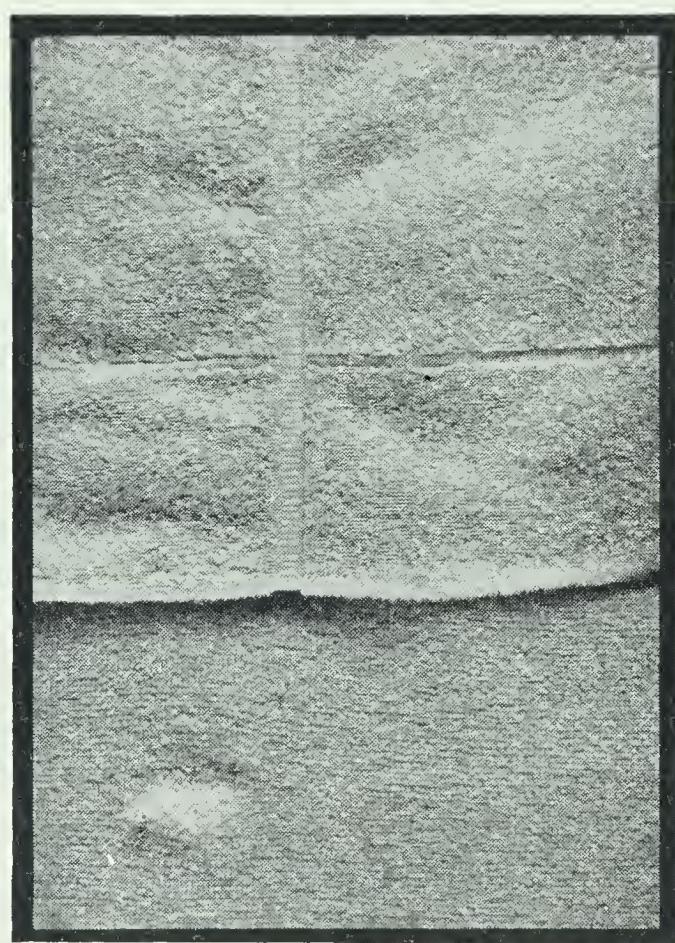


Fig. 11. Defects in construction.

Seconds. The towel at the top shows a weaving defect. The break in the yarns in the lower picture was in the base and hence not plainly visible until after laundering.

several inches in a cleaning process. Very stiff-backed rugs are likely to crack more quickly than those softer and more pliable. Imperfect rugs also may contain broken yarns, imperfect designs or uneven color. Edges are sometimes poorly bound. Many imperfect pieces in all types of fabrics are produced with the making of perfect or standard pieces.

Seconds have usefulness, and when they are honestly labeled and sold at a somewhat lower price than that of standard

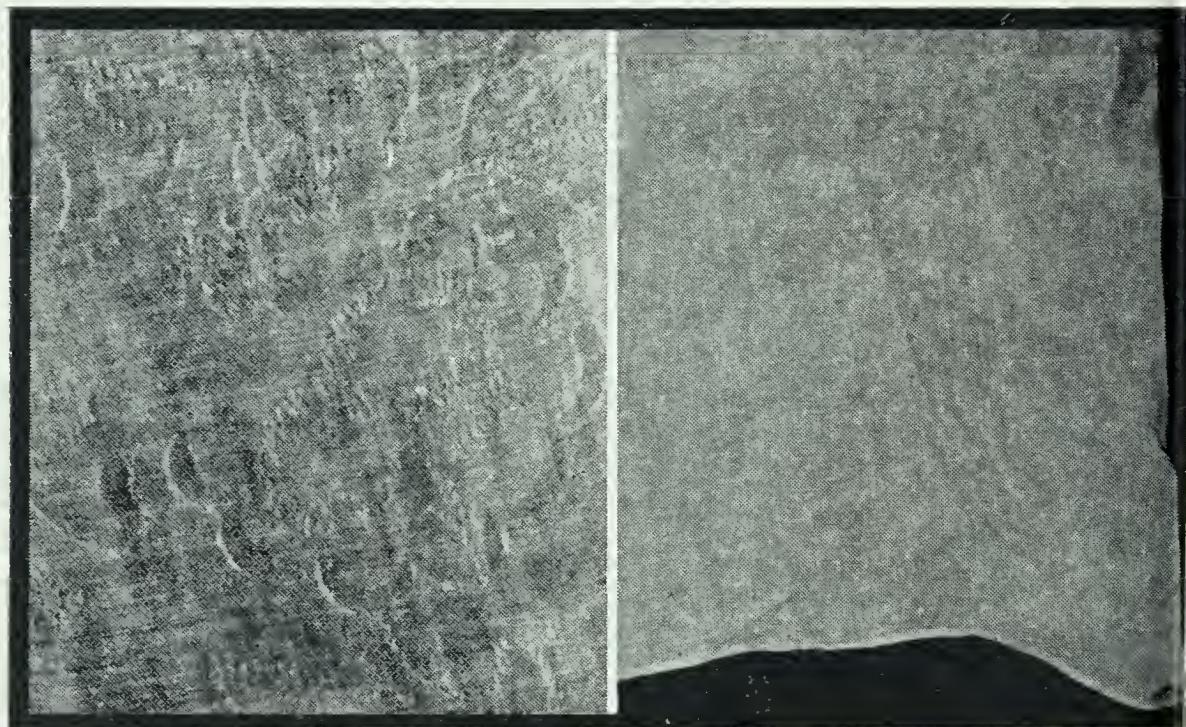


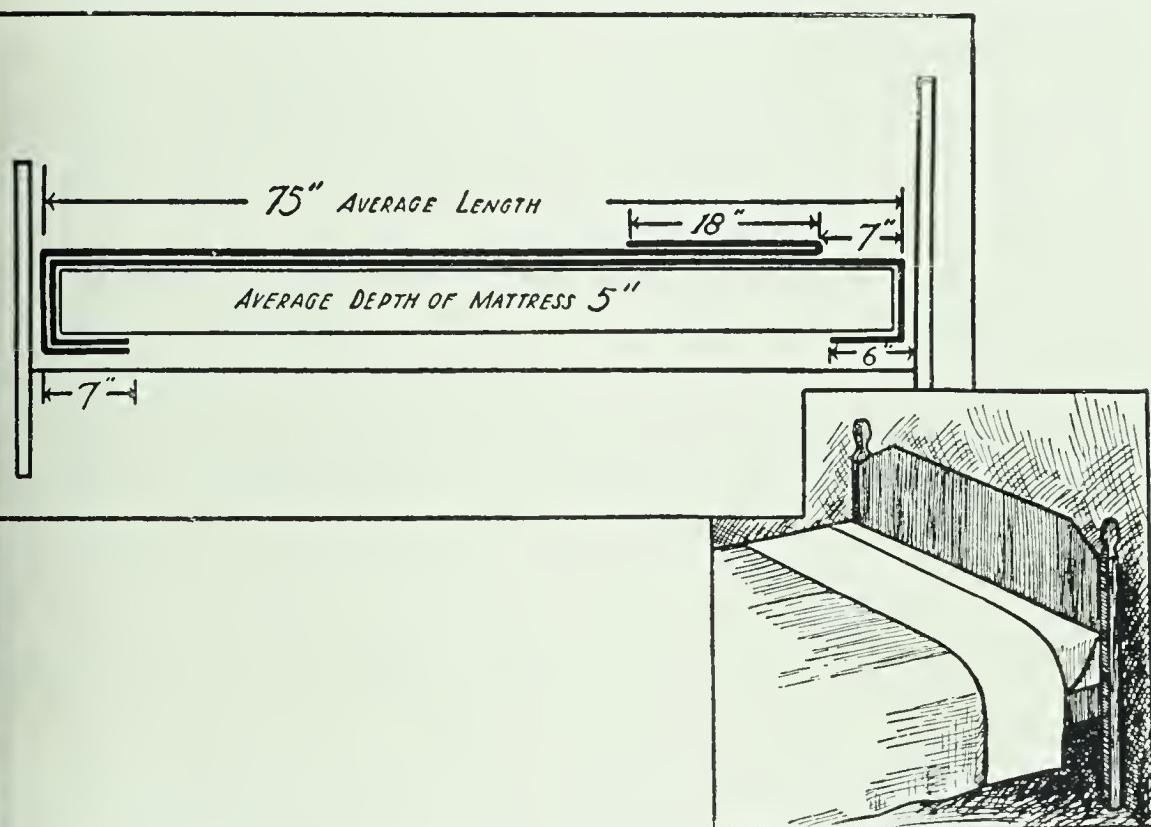
Fig. 12. Construction defects.

When new the yarns of this table cloth were so stretched and covered with dressing that the general appearance was similar to that of heavy damask. The first washing removed the dressing leaving the cloth thin. The yarn shrunk unevenly as shown making a wavy edge to the cloth and wrinkles in the center that could not be ironed out.

grade or firsts, they have a legitimate place in the market. The buyer has a right to know, however, that he is not purchasing perfect fabrics.

In ready-made furnishings, such as curtains, sheets, table cloths, napkins, rugs, and the like, it is highly important to get accurate measurements. Where it is likely that the fabric may shrink, one should buy a slightly longer or larger article than needed at first. Until washed, curtains may have the hem turned

up or remade into an extra deep hem. Sheets sometimes shrink several inches with laundering; hence it is well to plan accordingly. Sheets are commonly 99 or 108 inches long. However, short 90 inch sheets are also sold. Sheet lengths should be torn, not cut, since with cutting one side may be shorter than the other. Common widths are 63 inches (single or twin bed), 72 inches (single or three-quarter bed) and 81 inches or 90 inches, both for double beds.



*Courtesy of U. S. Department of Agriculture.*

Fig. 13. Diagram of sheet lengths.

A 108-inch sheet allows five inches for shrinkage and a generous tuck-in at both the foot and head of the bed. A sheet of ample length stays in place and makes a well-tailored bed.

Pillow cases should slip easily over pillows and be four to six inches longer than the pillow.

To be sure of the size needed in sheets, measure the length, width, and depth of the mattress. Allow amply for turning the bottom sheet under at both top and bottom as well as sides. A well-tucked-in sheet stays smooth better and is more comfortable. Also it wears better. The top sheet should turn well back

over the blankets. This helps to keep the blankets clean and to hold them in place.

#### PAINT

**Use.** Paint is among the commonest of the highly useful household materials from which much pleasure is derived also. By means of paint a fresh appearance is given to both the exterior and interior of houses. Wood is protected from the decay started when rain soaks and softens boards exposed to weather. Floors are protected from the tread of walking. Metals are protected from rusting and corroding. Plastered or otherwise mended walls, later covered with paint, are further sealed against the escape of soot, dust, or vermin.

**Broad use of term *paint*.** Broadly considered, paint may include shellac, varnishes, and lacquer, none of which are paints in the strict sense of the term, for they are not only different in composition but must be handled differently; yet they serve the same general purposes of protecting surfaces and giving a better appearance. In this sense they classify with paints.

**Quality of paint.** The paints that home owners use are applied both to the outside and inside of houses. Outside and inside wear are different enough to affect the qualities to be sought in paints. If you could select both a poor and good quality of outdoor paint and cover a few feet of fence or an inconspicuous area of a house with some of each, time would show the differences. The poor paint would be likely to crack or flake, and chalk. Rain would soak under the paint and into the wood at the edge of the cracks and the paint would wash away sooner. Some paints are more flexible than others; that is, they will give under pressure without breaking. Where pressure wear, such as that of walking or the weight of china on shelves, must be expected, more flexible paint is better because it cracks less easily. Good paint should retain its smooth surface and wear much longer than poor. Obviously then there are paint values other than color, but values which one does not see until some time after paint is applied and used.

**Fading.** Paint color, like dyes in fabrics, is subject to fading, and one of the reasons for satisfaction is the permanency of the paint color. Heat such as that of radiators or stove pipes darkens paint after the manner of slow scorching or burning. Paint may even blister, turn brown, crack, and rub off. Paint exposed to sunlight may change several shades in a season's time depending upon how permanent the color is and how much it is exposed to sunlight.

**Testing.** Within the paint industry testing is carried on so that it is possible for manufacturers to say with some degree of assurance what kind of wear one might expect from paints of different kinds. When several hundreds of dollars are spent for the materials and labor of painting a house, it is important that the owner should have some notion as to how long the job may be expected to last. Even if you might be spending but a few cents and personal time to repaint a chair or a cupboard shelf it would be a disappointment to use paint that quickly fades or washes away when it is necessary to use soap and water to remove a soot film or spilled food. In choosing paints you select not only a bright new surface covering for the time being, but one you must live with until replaced or covered with a new coat, hence, testing is needed to know how it will wear.

**Composition.** According to the government bulletin of the bibliography,

All paint, whether it is bought ready mixed or mixed on the job, consists of a solid (the pigment) in a liquid (the vehicle). The pigment, a very finely divided solid, gives the paint its power to hide and color a surface. The vehicle makes it possible to spread the pigment over the surface, and upon drying binds the pigment particles to the surface and to one another. As a rule both pigment and vehicle are mixtures. Linseed oil is valuable as a paint vehicle because when it is exposed to the air it changes from a liquid to a transparent and flexible solid.

Most of the household paints used for small repair or home-improvement work are bought ready mixed in cans of a size

suitable for the job to be done. Exceptions are the mixing that may be necessary for matching colors.

**Guides for purchasers.** Two general guides for buyers are: (1) Purchase from reliable paint dealers who in turn handle the products of reliable manufacturers; and (2) read carefully the labels of the can. Some labels, particularly in states where required to do so, give the composition of the paint. By making a study of the characteristics of individual paint ingredients the interested person may be his own judge as to how good it probably is. The inexperienced person who cannot take much time for study may be obliged to rely upon the dealer's answers to such questions as the following: On what kind of materials can I use it? How long can I expect it to last if I use it on a kitchen chair or pantry shelf that may be washed once in a week or two? If it is a floor paint, approximately how many washings with laundry soap and water but no scouring powder should it withstand? How fast will it fade or change color in sunlight? Are there any sample painted boards used in sunlight from which to judge whether it should be expected to fade, and if so, how much?

Paints are used on toys, babies' cribs, high chairs, and play tables. Both babies and very young children put toys in their mouths, chew on crib rails, and the trays of high chairs. It is therefore important when choosing paint to be used on toys or children's furniture, that it should not dissolve easily as water paints do, nor chip and flake. Well-dried, flexible paints, enamels, lacquers, or spar varnishes may be sufficiently durable.

Sample boards rather than painted paper cards are more reliable also for selecting colors since the same paint dries differently on different materials. If old paint, paper, draperies, or other materials already in a home are to be matched or good contrast colors selected, the chances are that some mixing may be necessary. Large paint houses carry, in addition to mixed paints, pigments in tubes of one- or two-ounce size. White paint can then be colored to the desired value or intensity. A clean piece of otherwise waste window glass is satis-

factory to use for testing spots of color as one progresses in the mixing process. Before a final decision is reached on exact work the samples should be allowed to dry, since dry paint is often different in color from wet. (See pages 43-49.)

#### FURNITURE

Like textiles, there is much variety in furniture. There are specific pieces for many different uses and different construction and materials as well as designs. The market has poor as well as beautifully designed and substantially built furniture. Much is good in one or two respects but mediocre in others. Obviously one needs to know what qualities will serve the specific purpose best.

**Unseen values.** The greatest amount of household furniture is made entirely or largely of wood. Before green lumber, or freshly cut trees, can be used for either house or furniture building, it must be cured or dried until enough moisture is lost, and the wood cells are evenly shrunken in size. The evenness of this drying process and the extent to which it is carried before the lumber is used for manufacture determines whether or not the furniture will warp when used in the warm, dry atmosphere of houses and apartments. Because this drying process is slow, and valuable wood must lie months, even years, for superior curing, efforts have been made to hurry it with kiln drying where the atmosphere is controlled. When carefully watched, kiln dried lumber may be evenly shrunken and good. The difficulty comes in hurrying the process too much and causing uneven drying. Inferior furniture that warps and falls apart may be the result of using badly cured wood. See Figure 14, page 195, to understand the extent to which wood shrinks with drying. The evenness and completeness of this drying, like the quality of textile fibers in fabrics or the composition of paints, represent value that you do not see as you walk among pieces of furniture in a store. Good curing of furniture wood is one of the unseen values given you by reputable furniture makers and dealers. Like paint that holds

its color, you understand the value only after months or years of wear.

But there are many values that you can see in the store if you train your eyes, and intelligent salesmen who show reliable merchandise will take pride in giving you information about good qualities in furniture.

**Purchase of a chair.** If you were buying a chair, it would be necessary to decide first what specific purpose it is to serve. Is it to be a kitchen or dining-room chair? A living-room chair? An upholstered or a rush-bottomed chair? A rustic split-log, or a metal porch chair?

There are both upholstered and unupholstered chairs. The overstuffed are entirely covered with fabric, beneath which there is padding and springs. The unupholstered are made entirely of wood or metal. Many are a combination in which the wooden or metal frame is largely exposed with only the seat and back upholstered.

The wearing qualities of upholstered chairs are hard to judge, for the frame, springs, and padding are covered. Some merchants keep open models on the floor to demonstrate where and how the chair frame is braced, of what wood it is made, whether the springs are tied or each encased in a firm fabric covering and whether horse hair, cotton, kapok, or other material was used for padding. Without such a demonstration piece one may tip the chair over for inspection where in some cases the webbing and open springs are visible.

The fabrics of upholstered chairs are on the surface, yet one may find it hard to judge of their value. Wool, cotton, linen, silk, and rayon are all found in upholstered fabrics. Wool reps are common, durable, and made in good colors. Brocades are often combinations of cotton and silk or rayon. In general they are rich in design, but lack the durability of a rep. Velours give much the soft, rich texture of velvet, but are better wearing, having wool or cotton for the cut pile of the surface. Linens are used only to a limited extent, usually in smooth-surface, plain-weave fabrics. Leather and fabrics imitating leather are also used. When old and dried out, leather

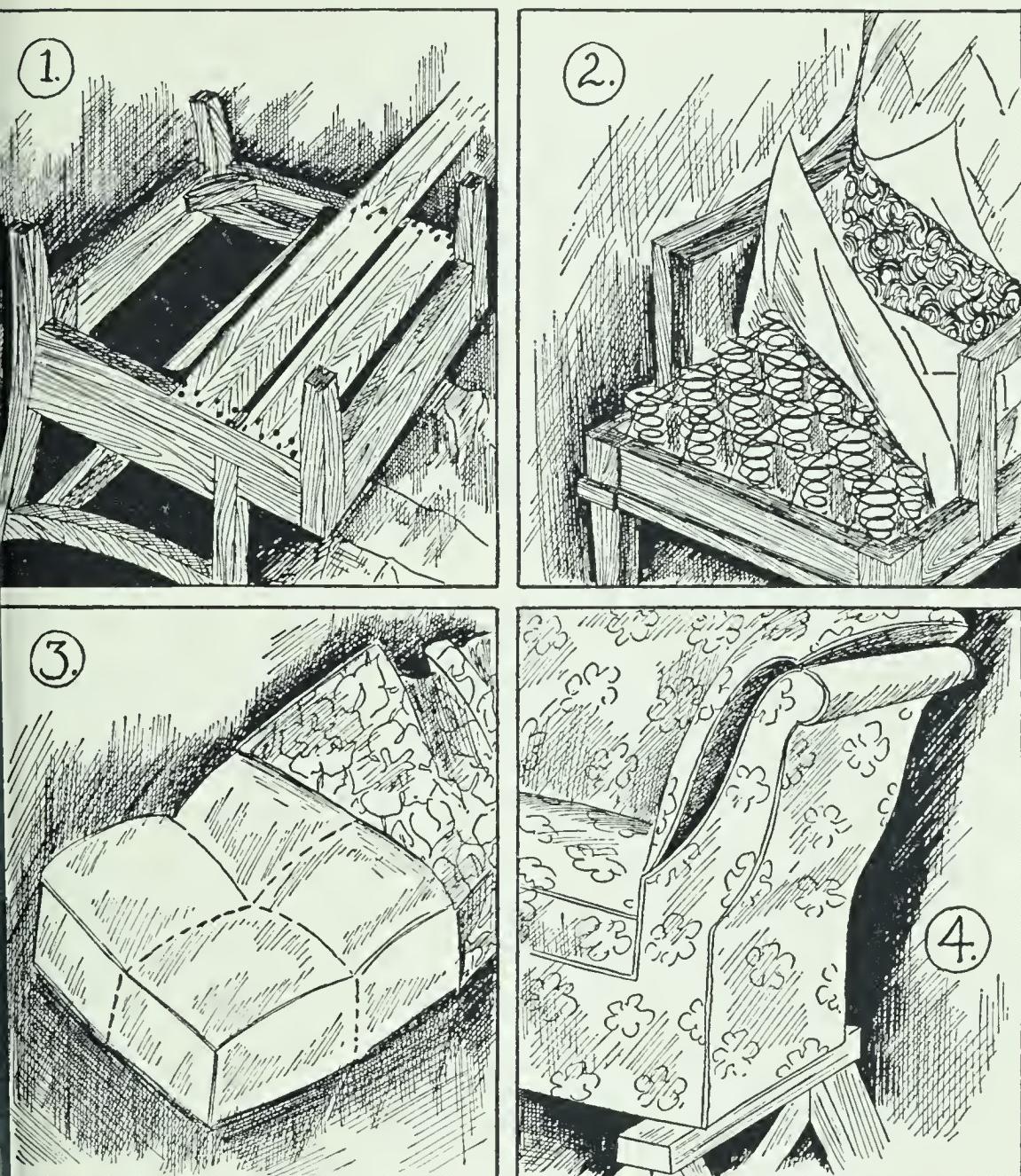


Fig. 14. What is beneath the upholstery?

Both substantial and weak qualities of construction are covered by upholstery. (1) Is frame of well-seasoned wood firmly constructed? Is webbing strong and well tacked? (2) Are springs well tied or individually encased in muslin covers? What kind of padding is used? (3) How well is padding distributed and secured in place? (4) What fabric is used for upholstery? How carefully are designs matched? How securely fastened at edges?

acks. Imitations may be very inferior, going to pieces in a few months, or durable enough to last for a number of years. The average purchaser of such coverings must usually rely on the judgment and integrity of the merchant.

Unupholstered chairs show their construction values somewhat better, for the frame is wholly exposed. The stretchers between legs may show plainly the marks of good designing and workmanship. Corners beneath seats may be well braced and arms firmly attached.

Since chairs are primarily to be sat in, the final test is comfort. Many a chair is good to look at but uncomfortable to use. It may be just too high or too low. The arms may be too close or too far for comfortable resting. The curve of the back may fit the spinal curve or be just enough too high or low to give good body support. The back may be high enough and properly curved to rest the head and shoulders or low as in a dressing-table chair.

The kind of wood used for the exposed parts of chairs gives qualities of beauty. Many fine-grained, rich-colored woods such as walnut, mahogany, and cherry supply qualities of beauty to furniture solely because of their color and wood grain. Some woods are soft and even grained enough to carve satisfactorily. Cabinet-makers speak of them as woods that are "easy to work." Some woods develop great beauty of color and luster with waxing and polishing. After years of service, furniture of such woods is more beautiful than when new.

In veneers, which are paper thin slices of wood from burls or stumps, we have the rarest examples of fine design as a result of tree growth. Veneer is glued to a base of substantial but less beautiful wood, thus giving a rich surface. Poorly manufactured veneer furniture will crack and split, but well-manufactured veneer furniture is substantial and may outwear pieces made of solid wood. The joining and matching of fine veneer work is so close and smooth that it is extremely hard to find the lines of connection. Pianos and table tops often show superior workmanship.

In looking at furniture, get the habit of examining beyond the surface. Dresser drawers, for example, may show beautiful workmanship in the smoothly rounded edges of the drawers and the substantial joining of corners. Between the drawers o

well-made dressers is a lining or shelf of wood that aids in keeping the contents clean. Try the drawers of a piece of furniture before purchasing it to make sure that they slide easily, and always test the hinges of doors on cabinets and all locks to make sure that they work. Many a piece of shoddy furniture has glaring defects of workmanship as well as design that could be detected while still in the store.

There are a few occasions when furniture need not last long, and cheapness is the main consideration, but such cases are rare. Usually furniture is bought to serve for years, or from one generation to another. Its selection deserves more than superficial attention to mere color and fashion.

In the purchase of furniture, instalment plan buying has become common. Though there are legitimate uses of instalment-plan buying, there are so many abuses that it behooves good buyers to consider them. One common difficulty is that purchasers contract to buy more than they can afford. When an emergency such as illness, or loss of employment comes, instalment payments stop and the merchant collects the goods. The purchaser loses his payments. For waiting to receive his payments, and the cost of possibly being forced to take the used furniture back, merchants figure on being paid. To cover such losses the original price of the furniture must be extremely high in comparison to its worth. Many buyers who expect to pay cash avoid buying in stores where the instalment plan is used because they realize that they are either paying an exorbitantly high price or getting a very inferior product.

#### MACHINES

**Kinds.** Sewing machines; vacuum cleaners; electric washing machines; gas and electric ironers; electric beaters; juicers, peeler, and metal polishers; refrigerators; oil burners; air-conditioning machines; electric dish-washers; garbage grinders; and bread dough mixers, are representative of the types of machines for household use. In looking through this list

you will quickly pick out the machines that as a general type have gained widespread acceptance as well as those that are satisfactory only in certain homes and under given conditions.

**Established and unestablished types.** Sewing and washing machines are of the first general type. Where home sewing and washing are still done, the question is what kind of machine will best serve in this particular place rather than are sewing and washing machines yet sufficiently perfected as to be successful?

Among the machines that operate successfully but do not have wide vogue are dish-washers. One reason seems to be that in small families the clearing of the table, rinsing, and stacking the dishes for the machine is considered by house-keepers to be as troublesome as washing the dishes. No machine yet collects the dishes and packs the machine. For big families or institutions the problem is at once different. Here many dishes must be handled, and a machine can be a time-saver. Also dishes washed and rinsed in a machine properly operated are sanitarily clean. If they dry by evaporation mineral salts of city water are great enough in some sections of the country to leave spotty deposits to which many people object. They are not unsanitary but unsightly. To polish off these spots means wiping the dishes and therefore taking back part of the hand work that the machine should eliminate.

In some of the early machines there was considerable friction and danger of chipping or breaking delicate china. If handled with reasonable care the best machines wash delicate as well as sturdy china without breaking. The questions of the buyer concern the volume of dishes to be washed, the mineral salt of the city water, the cost of the machine, and the value of the home-maker's time. Occasionally persons whose hands are supersensitive to soapy water develop painful cracks in the skin (a disease known as salt rheum). For them a dish-washing machine has a peculiar value and may be justified on the basis of health.

**Machines as aids to health.** Many machines can be fully justified upon the basis of health. The vacuum cleaner ha-

revolutionized cleaning. To eliminate clouds of dust that were raised with cane brooms and feather dusters a dust-proof cleaner-bag collects the dirt which can then be emptied into a paper and burned. In the washing machine sudsing and dirt removal can go on at almost boiling temperature. Though clothes are no more thoroughly sterilized than with the old-fashioned boiler method, the elimination of the effort of lifting heavy, steamy clothes into the boiler and out is a saving of back strain. Where refrigerators are so constructed as to be safe from the possible escape of poisonous gas, they are definitely an aid to health because of their superiority in holding foods at a temperature too low for the rapid development of bacteria.

**Quality of work.** Many of the perfected makes of household machines are further justified because of the superior way they work. A well-constructed vacuum cleaner sucks dirt up through the pile of rugs and does away with breaking yarns, danger when carpets were dragged from houses, pulled over clothes lines, and pounded with wire beaters. The better removal of sand and grit also prevents wear on rug fibers. Fabrics may be less worn from the force of sudsy water being wished through them in washing machines than from friction on a board when rubbed by hand.

**Cost.** Unfortunately household machines are in general still too costly for widespread use over the United States. Though some machines are undesirable at any price in certain houses, the most serious handicap to the more universal use of household machinery is probably cost. Most people with average intelligence can learn to use household machines as now put out if they are interested to learn.

**Possible usefulness.** Still another minor handicap is the time and effort necessary to learn to run household machines efficiently and to care for them properly. A few are still complicated and necessitate so much work in taking them apart for cleaning and reassembling that they are not justified on the basis of the work saved. This is more likely to be true in families of two or three persons rather than in larger families

where the bulk of work that one person must perform is greater.

Before finally deciding to buy any household machine one should learn to use it in the store and try to imagine it in one's own home situation. When used by a demonstrator who is highly skilled it may appear simple enough, but under home conditions where it must be kept clean and in order for the sake of very little service it may not be worth the investment.

#### QUESTIONS FOR BUYERS

From some observation you can see why intelligent purchasing of household materials requires extensive study. No one book could contain specific information about all materials. Nor would you have time to study each material separately. However, with practice pieces it is possible to develop habits of thinking to aid in the purchase of any. Instead of following the suggestion of advertisements and buying a washing machine "because you love your wife"; soup for "your king—the baby"; or baking powder because some well-known woman's photograph is on the advertisement, you might try to think what values the article has for you. In the case of textiles, paint, furniture, and machines, one may ask what it is designed to do and how well it succeeds in doing this.

There are a few common-sense questions that every one can learn to ask about different types of products. In the main they are of two general types, very simple and easy to remember. First, what is its chief purpose? Secondly, how well is it made to serve this purpose? The following outline, in addition to giving some questions and suggestions that you may be able to apply in your home or the school department, is intended to *aid you in establishing habits of thinking* rather than to serve as rigid rules for buying specific articles. Such questions give a starting point from which to proceed in studying products you may be wholly or in part responsible for selecting. You will note that beside meeting their chief purpose most good articles give other values. The questions under *Con-*

siderations of the Buyer help you to find some of these additional values. Questions are given about a few definite products because it is easier to practise on concrete problems. Towels, sheets, and paint head the list because subject-matter has been given in the text about these universal household materials. For other items you can refer to the bibliography and also study actual articles in schools, homes, and stores. Price in relation to the household budget and the number of items that must be purchased are general considerations.

#### BATH TOWEL

##### A. What is its chief purpose?

To supply a hygienic fabric with which to absorb moisture from the skin.

##### B. How well is it made to serve this purpose?

Considerations of the buyer—

1. Is the textile fiber of which it is made absorbent? Are fibers mixed?
2. Is it constructed to get the maximum of absorption?
3. Is it made of a textile fiber that washes well? Is it stronger when wet than dry?
4. Is it firmly enough constructed to withstand pulling about the body or swishing and twisting in the laundering process? Is it sleazy?
5. Does it have firm selvage edges and good hems?
6. If there are colored stripes, borders, monograms, or if the towel is of solid color, is the color fast to boiling and sunlight?
7. What is the size? In what sizes can bath towels be bought? How heavy will it be to handle either on the person or in the wash?
8. Is it a good looking towel?
9. What is the price? Is the price in relation to the values of the towel? For what priced towels will the family budget allow?

#### HEET

##### A. What is its chief purpose?

To supply a comfortable hygienic protection over mattresses or bed pads and blankets or other bed covers.

**B. How well is it made to serve this purpose?**

Considerations of the buyer—

1. Is it made of cotton or linen?
2. How easily can each of these textiles be laundered?
3. What advantages has cotton over linen for sheets in most homes?
4. If cotton, is it long cloth or percale? What difference will this make?
5. If long cloth, is it a fine yarn and close weave or a coarse, open weave?
6. If coarse, can you rub weighting out of it? Can you see the weighting by holding it up to the light?
7. Will a sleazy or firm sheet wrinkle the more when on a bed?
8. What effect has wrinkling on comfort and durability?
9. How large is the sheet? What are the common sizes of sheets?
10. How long, wide, and thick is the mattress for which the sheet is to be bought?
11. How much should the bottom sheet tuck under the mattress? Why?
12. How long should a top sheet be to tuck in at the bottom and fold back a quarter yard over the blankets? What is the advantage of folding a top sheet back?
13. Was the fabric torn or cut before hemming? What difference will this make?
14. Is color used for hems, monograms, or the entire sheet? If so, is it fast to boiling, suds, and sunlight?
15. Is it first quality or a "second"?
16. What of the following information does the label give? First quality or seconds, torn size before hemming, tensile strength of both warp and woof yarns, number of warp threads per inch, number of woof threads per inch, weight per square yard, name of manufacturer, trade name, price?

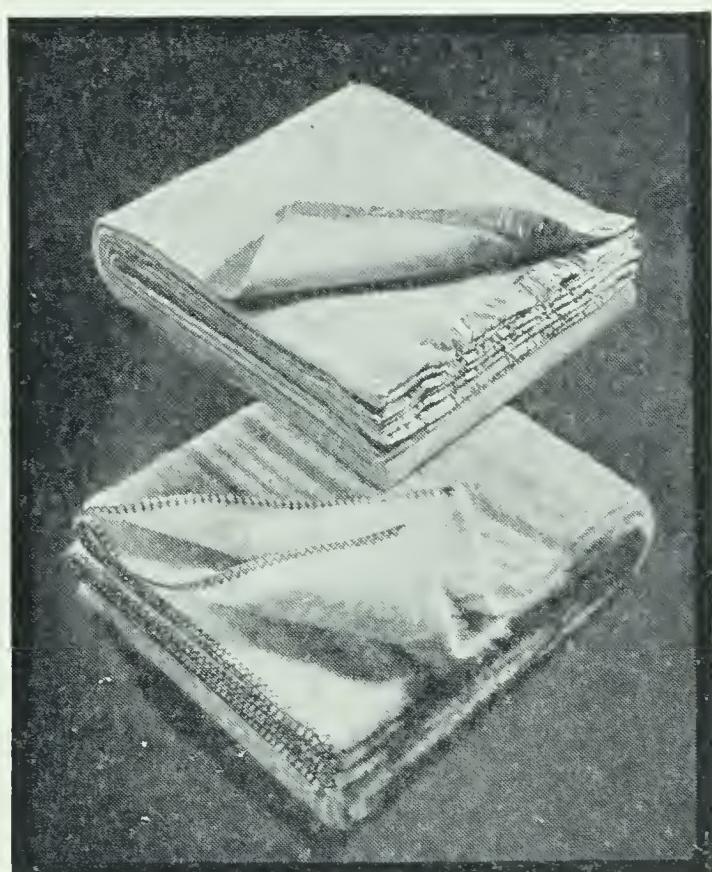
**PAINT****A. What is its chief purpose?**

To protect wood, metal, brick, or other material with durable and attractive surface.

- B. How well is it made to serve this purpose?

Considerations of the buyer—

1. Will it be used outdoors or inside the house?
2. What are the chief ingredients of paint? What qualities does each contribute?
3. How much information as to the composition of paint, or its wearing qualities can you find on can labels?
4. Are the wearing qualities of paints ever tested by manufacturers? Do any of them give information about these qualities?
5. How does walking on floor paint wear it? How does washing and scrubbing wear it?
6. How well should outdoor paint be expected to withstand rain, sleet, snow and sunshine? How well should furniture paint be expected to withstand washing with soap and water? Baby's sucking or chewing?
7. What kind of wear will paint on bedroom woodwork receive? What kind of wear on a baby's high chair? What kind of wear on a breakfast-room table top?
8. How many coats are needed to cover adequately?
9. How fast will it dry?
10. How wide is the range of color?
11. What is the cost?



*Courtesy of Marshall Field and Company.*

Fig. 15. Four-pound wool blankets, one bound in rayon satin; the other finished with whipped ends.

## BED BLANKETS

A. What is their chief purpose?

To give a light weight, warm cover that can be kept clean.

B. How well are they made to serve this purpose?

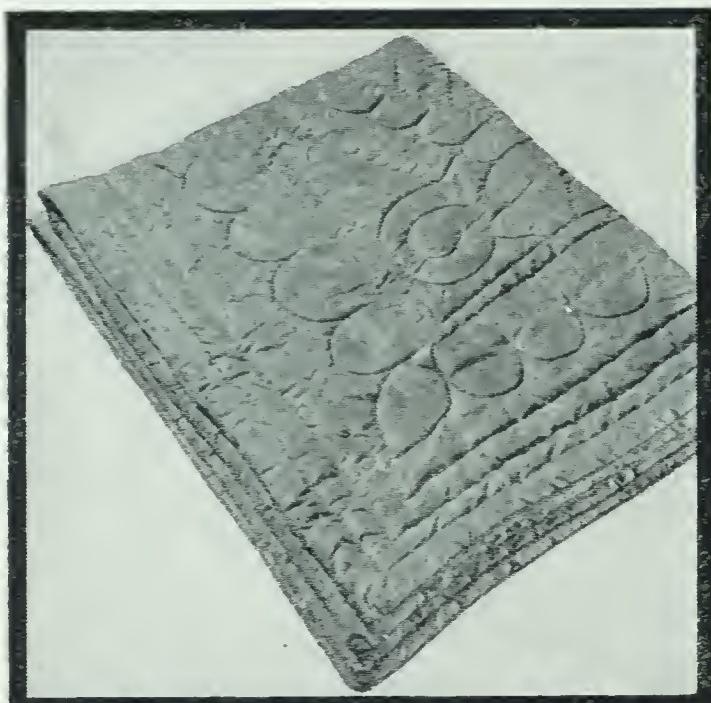
Considerations of the buyer—

1. Is it all wool? What are the possible advantages of all wool?
2. How do napped fabrics hold air?
3. Is it all cotton?
4. Is it a mixture? If so, was the mixture made when the yarns were spun or when the blanket was woven?

How can you tell?

What difference will this make in the weight, warmth, and launderability?

5. What is napping? Its purpose in blankets?
6. Why is it important that woof or filling yarns should be neither too thin nor loosely spun?
7. What is the best way to wash an all-cotton blanket?
8. How does the best method for washing an all-wool blanket differ?



*Courtesy of Marshall Field and Company.*

Fig. 16. A wool-filled comforter in a rayon cover.

SIZES OF BLANKETS<sup>1</sup>

For single beds	For twin beds	For double beds
<i>Inches</i>	<i>Inches</i>	<i>Inches</i>
54 by 76	66 by 76	.....
60 by 76	66 by 80	70 by 80
60 by 80	66 by 84	72 by 84
60 by 84	66 by 90	80 by 90

<sup>1</sup> "Selection of Sheets, Blankets, Towels," *Farmer's Bulletin*, No. 1265.

9. What is the importance of good selvages and bindings?
10. How much should a blanket tuck in at the foot of a bed, and how far up must it come to cover the shoulders easily? What are common blanket lengths?
11. Answers to which of the following questions might one expect to find on the labels of blankets? How much of wool or other fiber does it contain? Total weight or weight per square yard? How slowly does heat pass through it? Is it first quality or a "second"? What is its tensil strength? Warp? Woof? Size? Cost? Manufacturer's name?
12. Is it natural, creamy, dark, white, or dyed? If dyed, are the colors fast to washing and sunlight?

### PARING KNIFE

- A. What is its chief purpose?

To provide an efficient and comfortable tool for removing the skins and sectioning vegetables and fruits, as well as cutting small pieces of food.

- B. How well is it made to serve this purpose?

Considerations of the buyer—

1. Of what kind of steel is the blade made? Will it take and hold a good cutting edge?
2. Is the steel readily affected by fruit or other acids?
3. Is the relationship of blade length to handle such that it can be easily used when held in a paring position?
4. Is the point such that the eyes of potatoes, or spots on fruits or vegetables can easily be dug out?
5. How well does the handle fit the hand?
6. How firmly is the blade fastened into the handle?
7. Is the handle painted or enameled? If so, is it to cover poor material and workmanship, to give a smooth non-splintery surface in the palm of the hand, or merely to add the pleasure of color?
8. Is it labeled? If so, what information does the label contain?

### FOOD GRATER

- A. What is its chief purpose?

To provide a piece of household equipment for finely dividing foods with ease and safety to the worker.

- B. How well is it made to serve this purpose?

Considerations of the buyer—

1. How is it constructed? Is it flat, tubular, or a rotating cylinder so encased in a metal frame that it can be operated by turning a handle and forcing the food through with a wooden press?
2. Is there likelihood that one would tear the skin of the hands in using it?

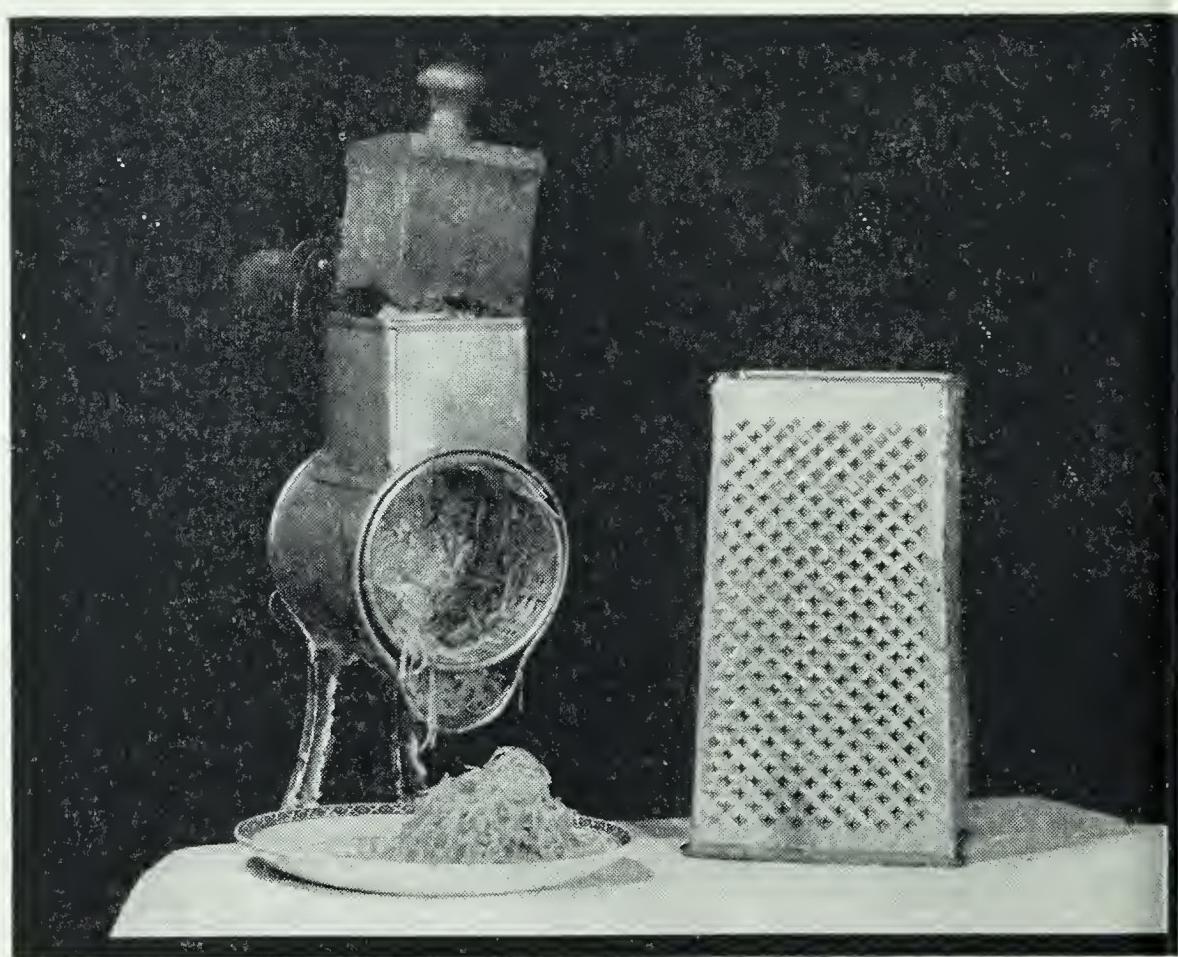


Fig. 17. Types of food graters.

At right a grater in which foods are torn apart by rubbing them against a rough surface. At left a grating cylinder attached to a handle that turns inside a metal cover.

3. Will the material of which it is made rust easily or be affected with food acids?
4. For what kinds of foods can it be used?
5. How easily can it be kept clean?
6. Is it hard to learn to use?
7. Is it labeled? If so, what information is given?

## COOK STOVE OR RANGE

## A. What is its chief purpose?

To provide a place to produce heat for cooking and baking. (Observe that this is the function of the simplest type and most stoves go far beyond their chief purpose in giving values to the consumer.)

## B. How well is it made to serve this purpose?

Considerations of the buyer—

1. Is wood, coal, gas, or electricity the fuel to be used?
2. If wood or coal, where is the cooking surface in relation to the fire box?
3. Where will the hottest area be? Where might foods be set that must cook slowly?
4. How does the heat circulate around the oven?
5. Does the stove provide for heating water as well as cooking and baking? If so, might this provision interfere with the baking? How?
6. Are there compartments for warming dishes or foods?
7. Does it provide for toasting?
8. Does it provide for broiling?
9. To how great an extent will it heat the room as well as cook food? When is this desirable?
10. Where are the drafts, and how do they operate in relation to the fire in the fire box?
11. How even is the heat of the oven? That is, will a pie or loaf of bread bake equally well in all parts?
12. Does the oven have a thermometer; if so, how reliable is it?
13. How costly is each, wood and coal, as a cooking fuel?
14. Where can you store your wood or coal? If living on a farm or in a small town? If living in a city apartment?
15. Of what material is the stove made? How can one clean it in case food is spilled?
16. Will the persons responsible for cooking know how to build a wood or coal fire and regulate the amount of burning and hence heat produced?
17. How well are legs supported or removable parts attached?
18. How well designed is it for good appearance?
19. What is the cost?

**GAS COOK STOVE**

- A. What is its chief purpose?

To provide cooking equipment that consumes gas as fuel  
(Again you can see that modern gas ranges far exceed their simple cooking purpose in the values given.)

- B. How well is it made to serve this purpose?

Considerations of the buyer—

1. How many burners and ovens does it contain? Is provision made for broiling? If so, how? Toasting?
2. What is the construction and size of burners? What kind of cone of flame do the burners give? What is the hottest point of a gas flame cone? When cooking pans are set over the burners how far are they above the hottest point?
3. How well are the oven walls insulated? How is the heat applied to the oven?
4. Are there warming ovens?
5. Is there a thermometer? An oven regulator? A clock with control for baking?
6. How is gas sold? What is the cost per hour of running one cooking burner? The oven?
7. Is there a pilot light?
8. Will the person or persons responsible for cooking know how to light and operate gas burners? Oven?
9. Of what materials is the stove made? How substantially is it built?
10. Are the pipes and pet cocks tight enough to prevent unburned gas from leaking into the room?
11. How easily can it be cleaned if food is spilled during the cooking process?
12. How easily can it be taken apart to clean burners?
13. How attractive does it look in the kitchen?
14. How much does it cost?

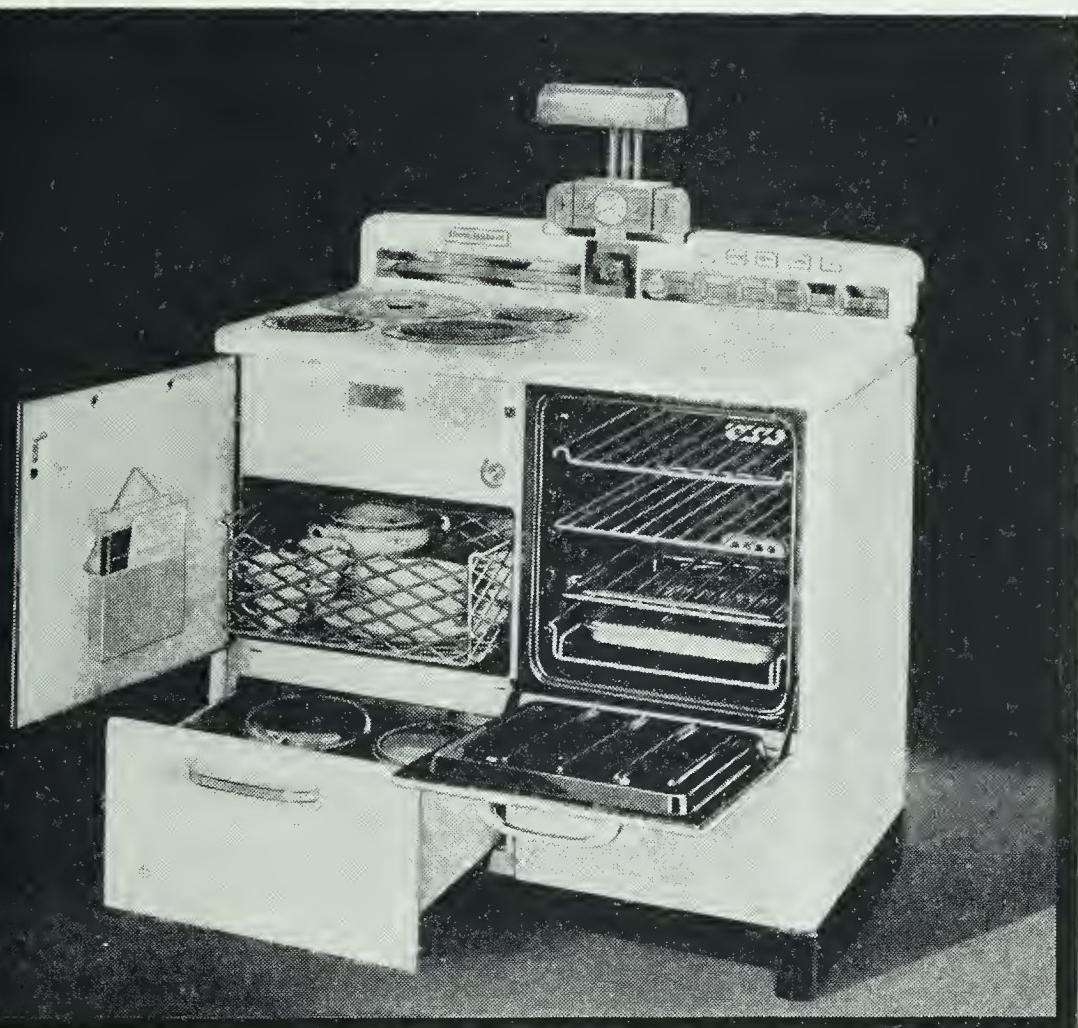
**ELECTRIC COOK STOVE**

- A. What is its chief purpose?

To provide cooking equipment designed to consume electricity as fuel.

- B. How well is it made to serve this purpose?

Considerations of the buyer—

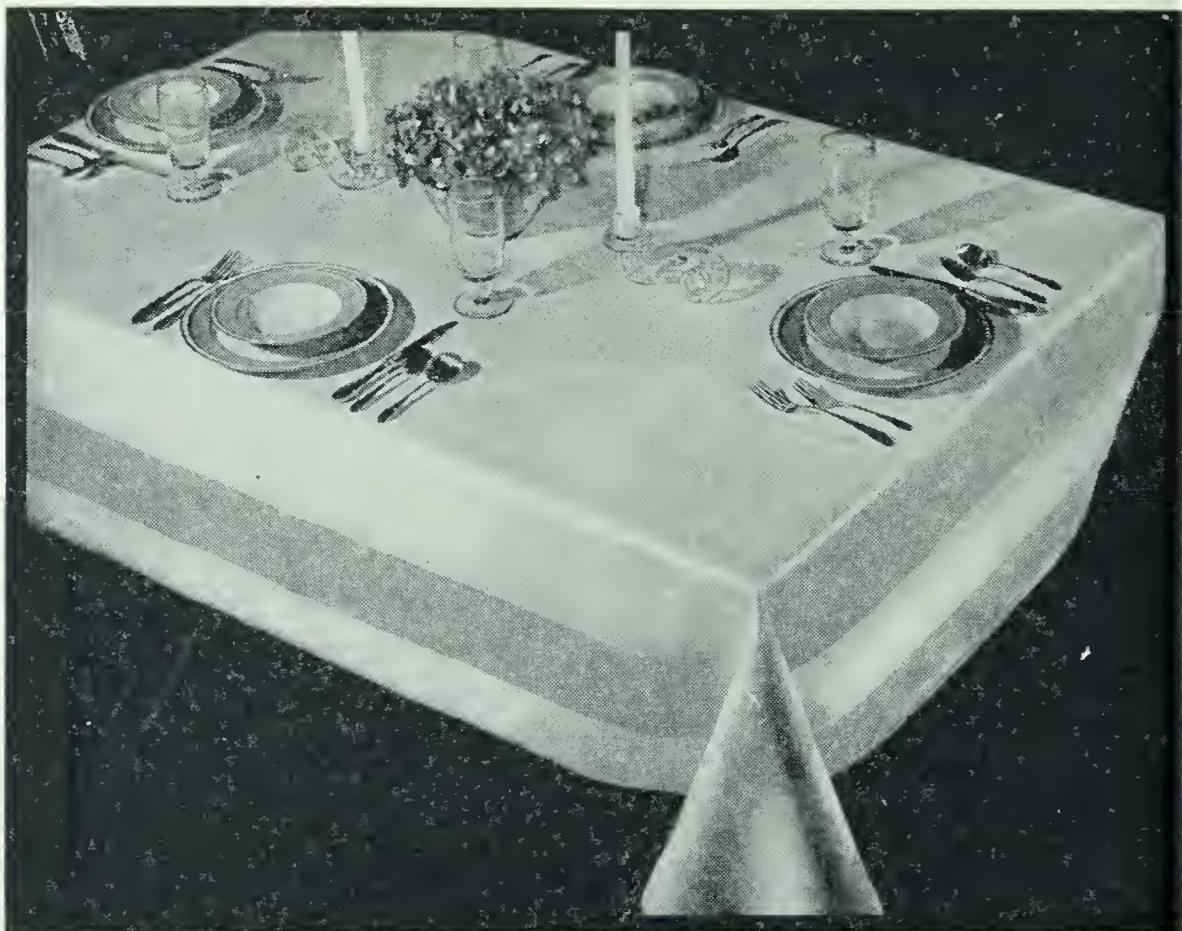


*Courtesy of General Electric Company.*

Fig. 18. A modern electric stove.

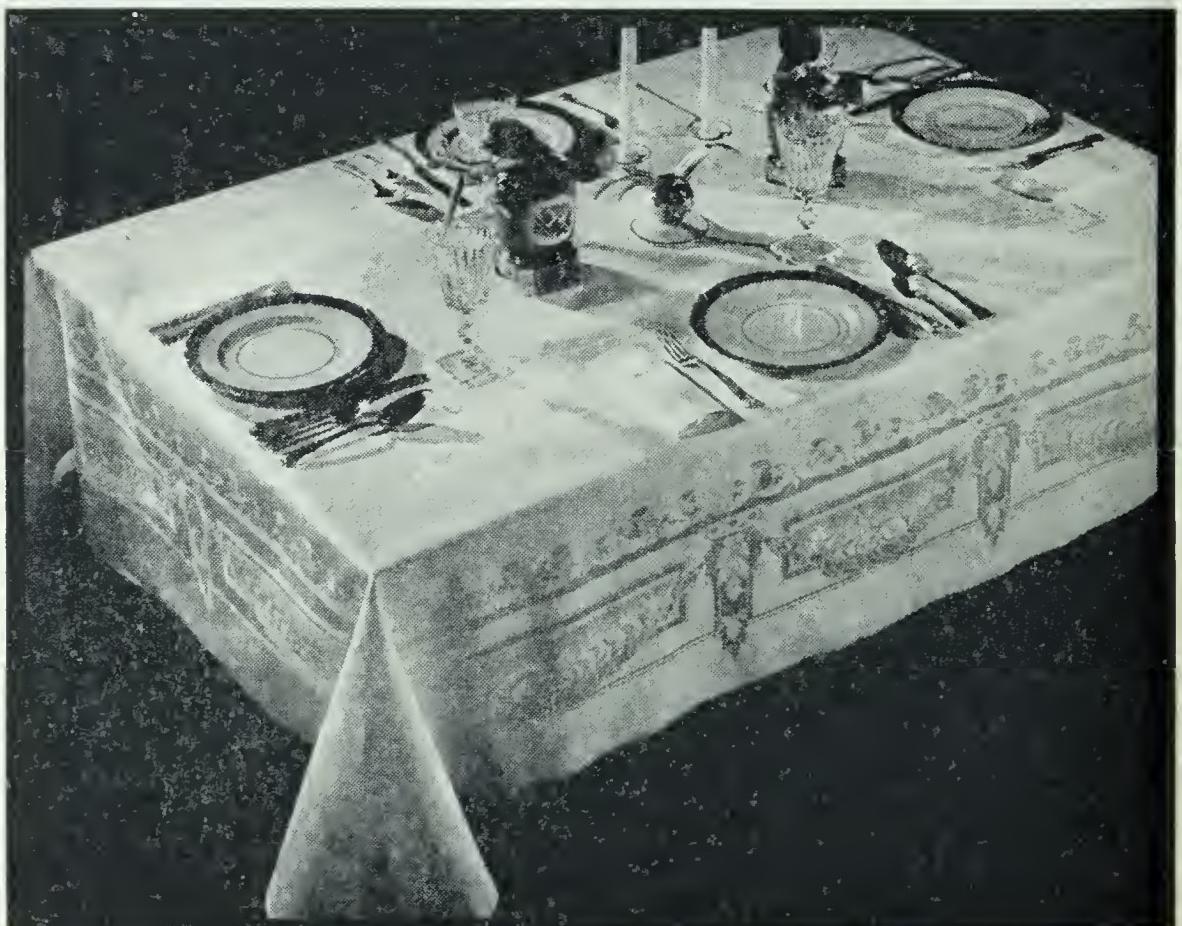
Observe number and kind of cooking units, embedded cooker at rear of top, clock, light switches, insulation of oven as indicated by thickness of oven door, sliding oven shelves, broiling unit and rack in oven, warming oven with dishes, storage space beneath, and smooth washable surface.

1. How does electricity flow through wires?
2. What can interfere with the flow of electricity?
3. Are the cooking units made of coiled wires left uncovered or is a solid metal plate used over them?
4. Where are the heating units of the oven?
5. How are the oven walls insulated? How well?
6. Is there a thermometer and oven control for the regulation of electricity?
7. Is there a clock control? If so, how is it operated?
8. Are there so-called fireless cooker compartments? How do they differ from an oven? How are they operated?
9. How much electricity is required to operate one cooking unit per hour? How much to operate the oven?



*Courtesy of Marshall Field and Company.*

Fig. 19. All linen plain damask table cloth with a band in which the floats are used to give a satin luster.



*Courtesy of Marshall Field and Company.*

Fig. 20. An all linen satin damask table cloth of fine yarns and close weave. Observe the richness of pattern due to the way in which these yarns reflect and absorb light.

10. What is the local charge for electricity? How much does it cost to operate the oven per hour?
11. How well is the stove designed and built for comfortable working height?
12. How well is it designed for ease of cleaning?
13. How well is it designed and built for beauty?
14. What does it cost?

## DISHES

- A. What is their chief purpose?

To provide sanitary, harmless, and esthetic utensils for serving foods.

8. How well are they made to serve this purpose?

Considerations of the buyer—

1. The following are common materials in which dishes have been and continue to be made: china, pottery, glass, wood, paper, metals, celluloid. Which can be re-used and kept sanitary?

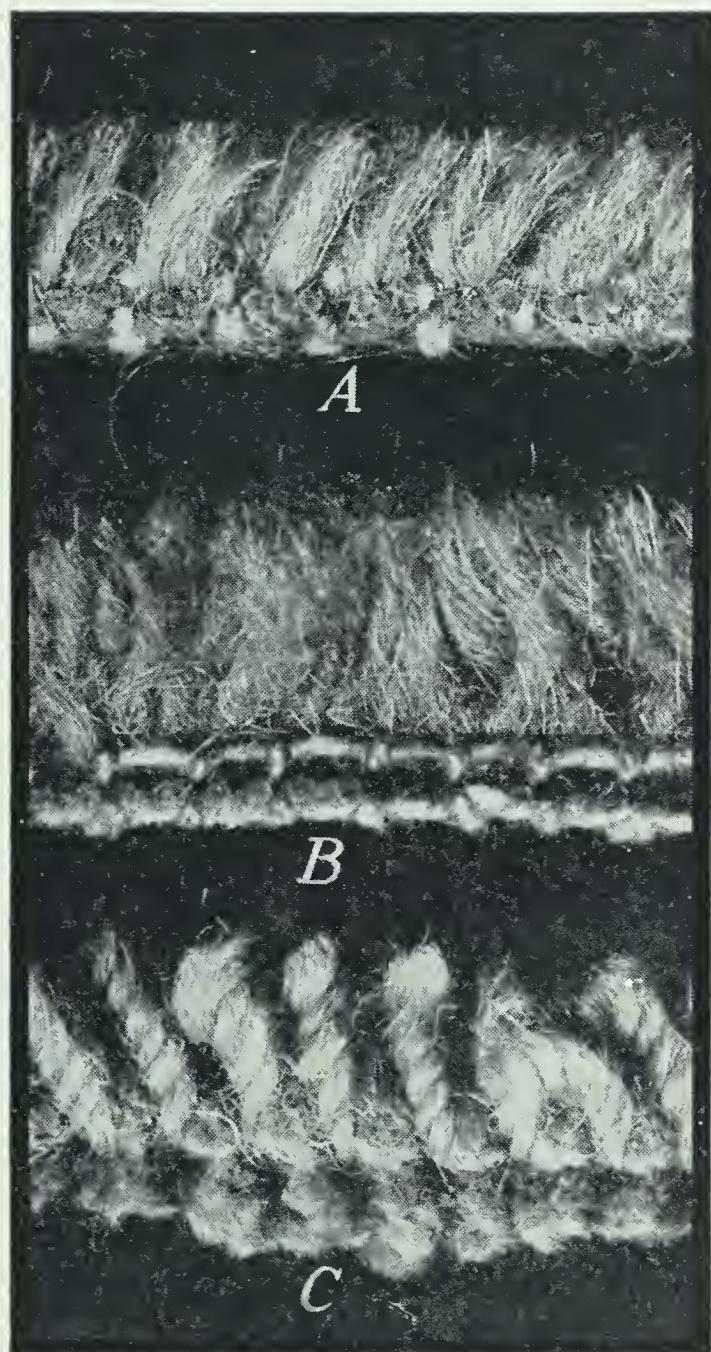
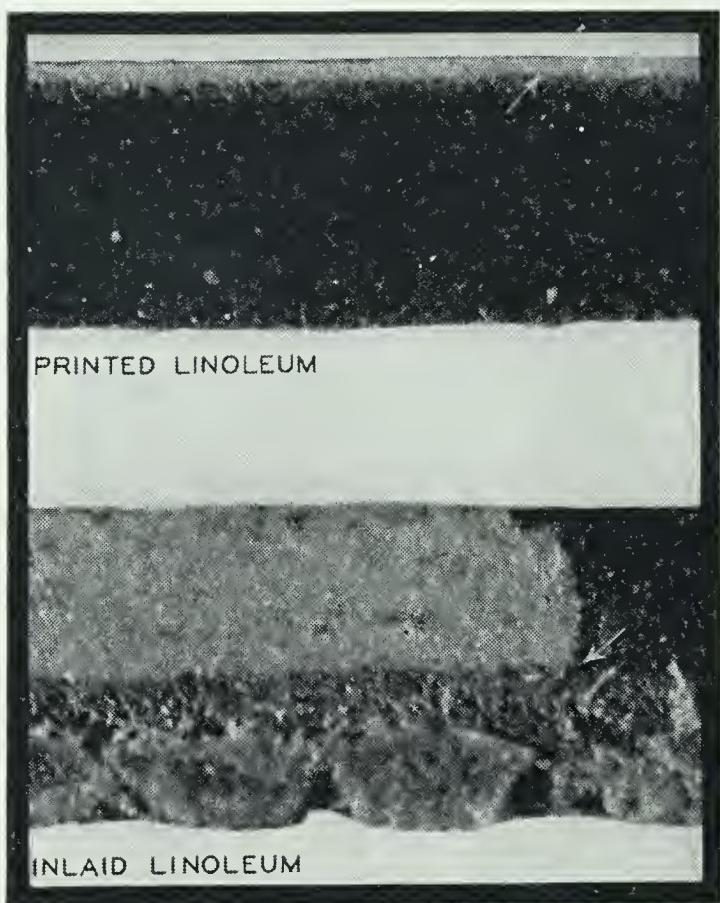


Fig. 21. Side view of pile carpeting.

Showing (1) difference in length or depth of pile between A and B, (2) difference in twist of yarn between C and the other two. Observe in B the yarns of the base that hold the pile in place.

2. Which of these materials crack and nick? Why are cracks and nicks unsanitary? How can they be dangerous?
3. Is china all of one grade? What makes for differences in grades of china?
4. Is all glass of the same composition? How does composition affect ease of breaking? Luster?
5. What are the sanitary advantages of having glazed or hard, smooth-surface materials for dishes?
6. What possibilities for beauty are offered in smooth, hard-surface dish materials?
7. What is the meaning of "open stock" in dishes? What are the advantages of buying open-stock dishes?
8. What are the sanitary limitations of paper dishes?
9. To provide one paper plate per meal for each of three meals daily for a family of four, seven days per week for fifty-two weeks would necessitate 4,368 paper plates. According to local prices for paper plates, figure the



**Fig. 22. Types of linoleum.**

At the top is shown printed linoleum. The lower picture shows inlaid linoleum. Notice the thickness of the surface and the woven textile base.

money advantage of dish-washing.

10. What colors found in china decoration make the most esthetic backgrounds for the widest number of foods? List a variety of food colors before deciding and be sure to include such brightly colored foods as toma-

toes, carrots, beets, blue cabbage, strawberries, lobster, watermelons, currants, rhubarb, and raspberries.

11. What general types of designs are likely to look best when food is in the dish? Describe a few.
12. On what parts of a dinner plate is design most appropriate? On what parts of a service plate is design most appropriate?
13. How do breakfast and dinner sets differ as to kind and number of pieces?
14. How widely do dishes vary in price? What reasons can you find for this variation?

#### REFERENCES

##### Books

- BALDWIN, William H., *The Shopping Book* (New York, The Macmillan Co., 1929).
- DENNY, Grace Goldena, *Fabrics* (Philadelphia, J. B. Lippincott Co., 1936).

##### Bulletins

- United States Department of Agriculture, Washington, D. C.  
"Floors and Floor Coverings," *Farmers' Bulletin* 1219, September, 1921.  
"Guides for Buying Sheets, Blankets, Bath Towels," *Farmers' Bulletin* 1765, December, 1936.  
"Methods and Equipment for Home Laundering," *Farmers' Bulletin* 1497, June, 1926; revised October, 1937.  
"Painting on the Farm," *Farmers' Bulletin* 1452, April, 1925.

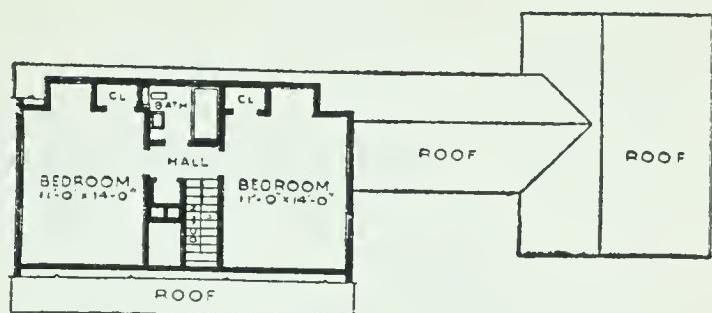
## 8

## PAID HOUSEHOLD LABOR

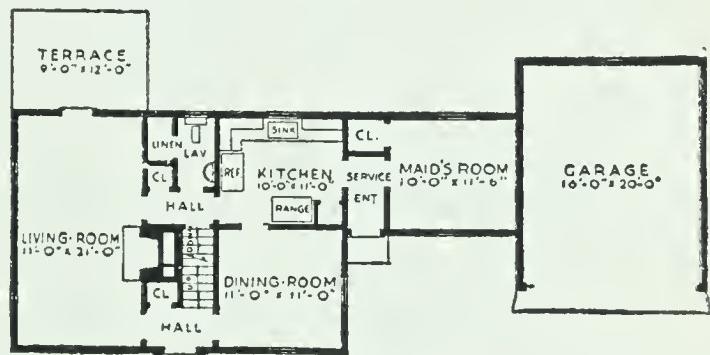
IT PROBABLY takes but little reflection to see that if the management of a home is a business there will be problems of labor. Under certain conditions this labor will be performed by persons to whom a wage must be paid. In a strikingly significant way the house is related to paid household employment because (1) in many cases workers are required to live on the premises as resident workers, hence the conditions provided for their living are an important consideration; and (2) because the size of the building, the articulation of its rooms, equipment, and furnishings as well as the standard of family living will determine how much work is represented in any given house. The floor plan (Figure 1) which was selected for a prize from among more than three thousand entries shows the "maid's room" to be an afterthought with comparatively little serious attention to adequate provision for a worker who is required to live on the premises. Yet the nature of housework is such that much of it must be performed early in the morning and late at night, thus making resident labor desirable if not actually essential in many cases.

In household labor to an even greater extent perhaps than in other forms of employment it is important that both employers and employees should understand the nature of the problem because their work relationship is direct and intimate. The chapter that follows shows aspects of the problem that are especially related to the house.

1. How does the work of a general household worker differ from that of a laundress? a nurse maid?



Second-Floor Plan



First-Floor Plan



Basement Plan

*Courtesy of "Better Homes and Gardens."*

2. What kind of household labor cannot be done away from the premises?
3. Explain how the work of a five-room apartment could take more time and physical exertion than that of a ten-room apartment?
4. How does sitting at the table after dinner in the evening lengthen the hours of a general household worker?
5. What is an emergency?
6. How can plans be used by both employees and employers to provide for getting the paid labor of the household into an eight-hour day for employees?

Show how the employee would need to plan the steps of her work in order to give service and how the employer would need to list and put into order the types of jobs to be done, and how she would need to watch for encroachments through "little extras" on the time of the employee.

Save your replies and after reading discuss these and other questions that come to you during your reading of this chapter. Discuss these questions at home as well as in class.

---

**Housing labor.** Labor is an important consideration in all housing. There is, of course, the big item of labor needed to construct new buildings or remodel old, and also the labor necessary to keep them up and carry on housekeeping in them. The first kind of labor belongs to the building trades, is a part of producing the structure, and ends with the completion of the building; the second belongs to the consumer and must be kept up as long as the building is used.

**Form in which labor is purchased.** From the preceding chapters it must be evident that some housing is planned for individuals or families who will do their own work inside their home, buying only that labor which comes in ready-made furniture, draperies, and beddings; or in canned foods, shelled peas, and meats that have been killed, dressed, and cut ready to put into the oven for roasting; or that which can be added outside the home as, for example, outside cleaning of furniture, rugs, curtains, or bedding; or storage of valuables. Even beauty parlor and nursing service, once a part of the private household, are now specialized and carried on in shops and hospitals. This is all former household labor that is paid for, but it is household labor that is not done by a paid worker in the home and under the supervision of the householder. Except for refinishing, washing, or dusting woodwork; cleaning windows and floors; heating the building and making repairs, it is possible so to manage that all labor could be sent out of the home. Even much of the care of young children may be

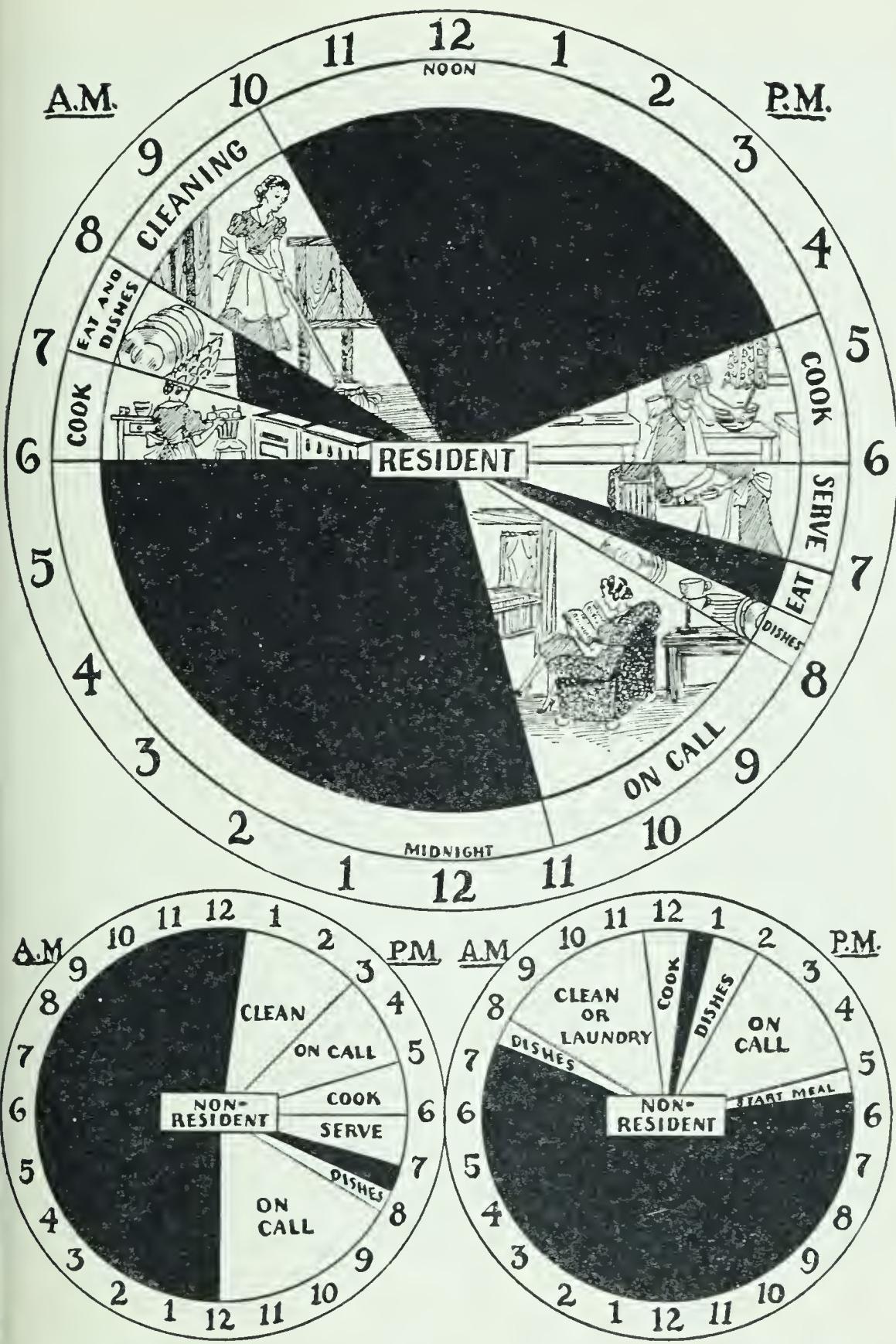


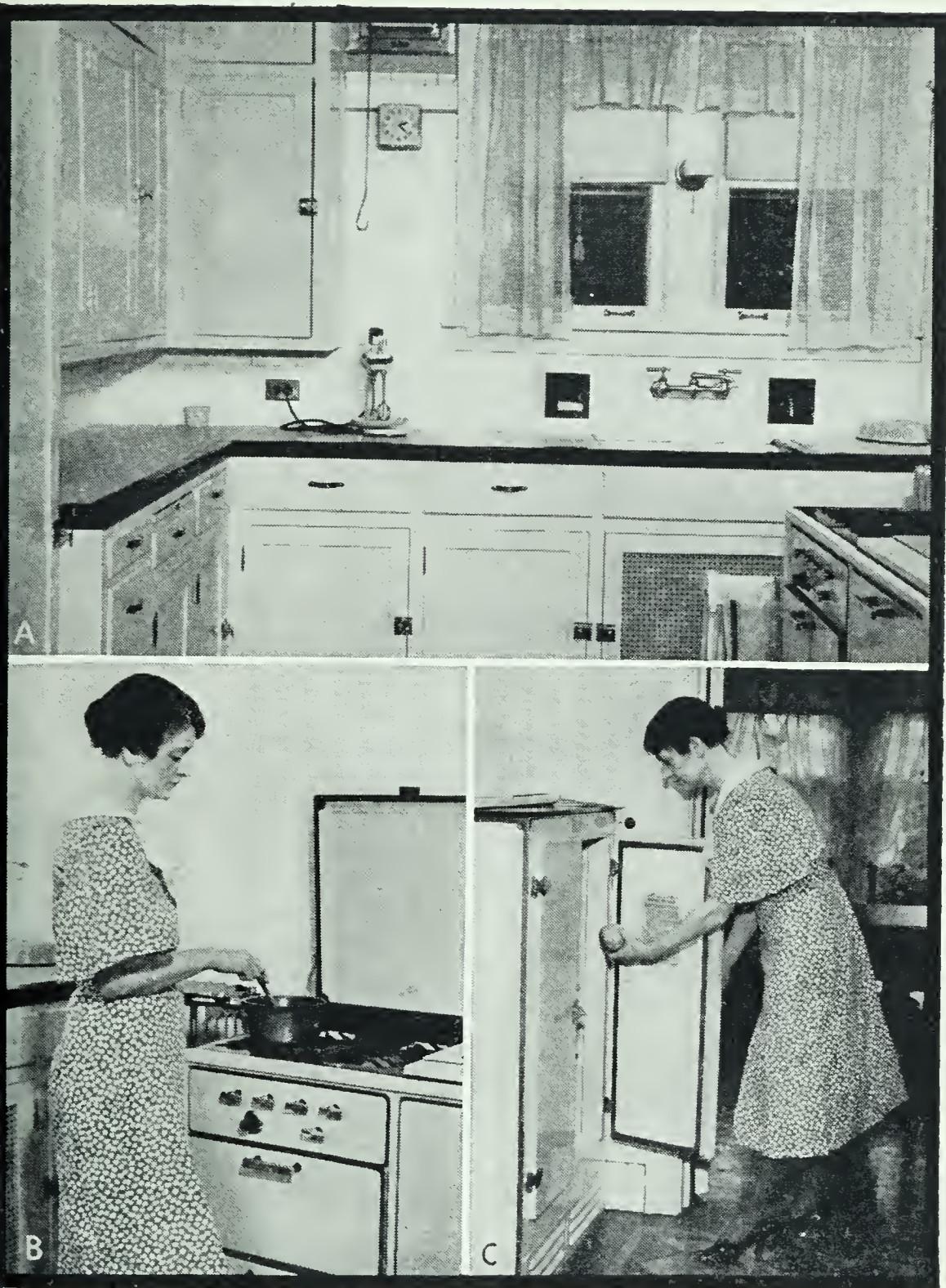
Fig. 2.

Above, one illustration of a time division for an eight-hour-day of a resident employee. Below, two time divisions for an eight-hour-day of non-resident workers. Two hours of time on call equals one hour of active work.

carried on in nursery schools, and these in turn may be either within a large apartment building or housed separately in the neighborhood as any other private or public school.

Sending labor outside the home results in specialization. The cabinet-maker who historically specialized in building furniture, and was successful, now has a factory or works in one. The baker, canner, or butcher have their specialized kinds of business. The cleaner may be so specialized that if he cleans rugs and furniture, he does not accept garments. But despite the development of specialized labor that can be done outside homes there still is the largest single group of women workers employed in some form of domestic labor. According to the 1930 census there were approximately three million women so employed. Most of this labor is more or less general in nature. Since to a great extent an employer is represented for each employee, the number of women directly involved in household labor may therefore be considerably more than the above figure.

**General character of household labor.** The labor of households is general in contrast to factory jobs or clerking; that is, there is a variety of both big and little jobs in every day of housekeeping. Even a little job, such as dish-washing, is not as mechanical and routinized as packing pears in a can, bacon in a package, or stockings in boxes. Furthermore, private homes do not have bulk enough of any one kind of work to employ one person for each small portion of a job as is done for example, in restaurants where one person may scrape dishes all day while another operates the dish-washing machine, and still others carry the dishes away on trucks. The one most outstanding characteristic of home work as compared to factory is the general nature of it. The single employee commonly engaged for home work may be expected to perform as wide a variety of jobs as the home-maker who does her own work. Even in the classification below where an attempt is made to specialize work it is obvious that the jobs are not of a simple routine type. Any one, if well done, call for skill and job intelligence.



courtesy of Mrs. Cleveland White.

Fig. 3. A carefully planned kitchen makes work easier.

Cupboards, drawers, sink, electric kitchen ventilator in wall, ventilated binet beneath sink, electric clock, electric mixer, water mixing faucets, wall soap dishes. B. Gas stove. C. Refrigerator.

PERSONAL SERVICE—HOUSEHOLD AND DOMESTIC  
(United States Employment Service)

Companion	Maids
Day worker	Chamber
Cleaning	Floor
General	<i>General</i>
Washing and ironing	Cooking
Governess	No cooking
Housekeeper	Kitchen
Farm	Nurse
Fraternity	Parlor
Home	Personal
Laundress	Ward
Washerwoman	Wardrobe attendant

Being a classification of labor for women this does not include butlers, chauffeurs, gardeners, nor of course the trades workers, such as plumbers, decorators, or carpenters. Nor are such part-time women workers included as the visiting nurse, the beauty culturist who goes to homes, the waitress-by-the-hour, and others.

From the following descriptions, however, you can see that this amount of specialization does not make for simple routine jobs. To be successful, workers need technical training.

The *cook* is primarily responsible for preparing meals. In an institution or large household the cook may do nothing beyond cooking and keeping the kitchen and store room in order. Where the food-preparation work is heavy the cook may not be responsible for making menus, and there may be a helper to wash dishes and keep the kitchen in order. The household cook is more often responsible for preparing meals and perhaps planning them, washing dishes, keeping the kitchen in order, and marketing. In addition she may combine cooking and waitressing. In a cooking position, the job should be defined for the specific household or other institution.

The *second maid* has several duties. She is waitress, and as such may be responsible for washing the table china, silver and glassware. She answers the door and telephone and may

make beds and keep bedrooms in order as well as be responsible for the condition of bed and table linens. She may mend draperies or cushions. Likewise, it may be agreed that she will dust daily and give special care to the living- and dining-rooms, remembering to water plants, keep shades adjusted, papers and books in order, ash trays clean, and order generally.

The *cleaning woman* sweeps, vacuums, or beats and airs rugs, carpets, draperies, and upholstered furniture. She washes windows on the inside, and if they are French windows or accessible from the outside without danger, she washes both sides. She washes and waxes floors. She cleans woodwork and furniture. She polishes electric fixtures, door knockers, or other metal, cleans a fireplace, and lays wood for the fire. In other words, she does the more thorough type of cleaning job.

A *laundress* may be responsible from the time she finds clothes in a laundry bag or hamper until they are ironed and ready to be put away. By special arrangement she occasionally collects soiled clothes from closets and replaces them clean, mended, and with the buttons sewed on. Also by special agreement the employer may do part of the work when there is more than enough for one worker and the employer does not employ a second one.

The *nurse girl* or nurse maid is not necessarily a graduate nurse though she may be. Her responsibility is for the physical care and general supervision of young children. Unlike a governess, she is not held responsible for schooling and education, though it is she who is important in giving young children their speech patterns, their food and body care habits, and their attitudes toward people and situations of the world in which they live.

The *housekeeper* is responsible for the physical care of a house and the premises. She may employ other workers, keep and render accounts, and create a setting for the social life of the family.

The *general worker* or home-maker's assistant does what the title implies. She works in the one employer household and believes the home-maker of such household tasks as they agree upon. It should be clearly understood between them what is

expected of the employee, and what living and working conditions as well as salary the employer expects to pay.

**Lack of training.** Now a difficult problem from the labor point of view is that neither household employers nor employees in general train for their jobs. One is about as likely to be unreasonable because she does not understand or is uninterested as is the other. Among employers there are all types: the intelligent, fair, and kindly; the schooled who have little interest in home-making or housekeeping; the superficial who want an employee who will wear a uniform and walk the dog; and a host of others. Among employees there is the efficient worker who likes the family and is always interested in helping to plan and manage for a smooth-running household. She is likely to see through situations quickly and have a sense of humor. On the other hand there is the worker who is interested only in the pay check and also the one who is dull of wit and capable of doing the simplest kind of routine work, and that only poorly.

Though work falling within domestic service is classified by the United States Department of Labor, workers shift from one type to another, often having little or no training for the kind they expect to be paid to do. Regardless of the fact that it would not occur to a person who expected to be employed as a stenographer that he or she would be able to find employment without a knowledge of typewriting and shorthand, many who think of household work feel that any one can do it. They think that any girl growing up in her own home has learned housekeeping. Some, however, grow up in homes where there are no beds and food is eaten from paper bags; others grow up in homes where they are never asked to participate in any form of housekeeping work. These latter are not necessarily homes of great wealth. In either case the home does not supply training that equips workers to command a wage.

The time was when one neighbor girl might go to help in another home, doing work there much as she learned at home to do it. Taken the United States over there is now wide variation in homes. Housekeeping as an occupation is highly

unstandardized and complicated as home-makers quickly realize. A wide variety of skills and judgments are needed in even a small home operated on a comparatively modest scale. The successful management of an elaborate home is a highly skilled job.

Imagine yourself in the position of employing labor to run a large house. How many household jobs do you know well enough to demonstrate and explain to persons who might need to be taught? Start with the comparatively simple jobs such as making beds; cleaning a bedroom, closet, refrigerator, or stove; emptying a vacuum-cleaner bag, cleaning and oiling any kind of household machine; washing windows; polishing metals; laundering table linens; waxing a floor, and the like.

But you ask, why should I, if I am the employer, be able to do the work that I pay another person to do? It is not necessary for me to build furniture or kill and dress animals for the meat I cook. Labor within the home is different to the extent that household employees are not specially trained and the employer may be called upon to teach, or in case the employee leaves on the spur of the moment, do the work. Furthermore, the home-maker who is intelligent about her job knows it as well as the business or professional person who is intelligent along his or her particular line of work. She is entrepreneur or the responsible manager.

**Teaching.** Even though employees know how to do the different jobs of housekeeping, each home-maker has the responsibility of teaching workers how well she wishes work done in her home, where to find tools and supplies, the likes and dislikes or idiosyncrasies of members of the family, as well as what kind and how much responsibility employees are expected to take with young children, aged persons, or incapacitated members of the family. This teaching can be pleasantly and agreeably done and is a definite responsibility of employers. Some choose to do it by working for several days with a new employee. One of the clearest, easiest ways of teaching skills is to demonstrate and explain or show how; so the plan of working with a new employee has the advantage of clearness as a means of teaching. Also it helps the employer to

understand how big a job is and to exercise better judgment in what it is fair to plan as a day's work.

Try to imagine that you are the employee. How many of the jobs previously listed could you do well enough to hold a position? How do you know? Who has watched you work and rated you? A person qualified to know how work should be done or some one who liked you and thought they were being kind in telling you that you were good? You see it may make a great deal of difference, for some employers may expect a good standard of work and merely dismiss you from a job without explanation when you fail to know how work should be done.

**Resident and non-resident labor.** Historically most domestic labor was performed by resident persons who lived in the home of the employer. Where one neighbor girl "helped" in a neighborhood home it often was far enough away so that the employee could not easily walk back and forth to work. Where slavery was in vogue, small houses were provided on the plantation or at the rear of a town house lot.

A variety of reasons can be given for the common practice of residence or "living-in." The nature of the work is one. Breakfast preparation comes early and dinner or supper dish-washing late at night, making for long hours. Housekeeping is not a money income business, hence in houses where there were extra bedrooms it was easy to give a room and pay a smaller wage. Now this creates a situation which can be worked out between fair-minded and honest employers and employees so as to be agreeable and profitable to both, but in the main employees object to "living-in" for several reasons. A few of them follow:

**Social isolation.** When the employer and employee do not have friends and interests in common, the employee is likely to feel that she is in no sense a part of the social life of the family. Unless arrangements are worked out with the employer so that the employee has a place in the house and feels free to entertain her friends, she is isolated from her own social contacts also. Exceptions occur in the case of persons who

are employed largely as companions and who want and enjoy social equality with employers. These cases are comparatively few. Some employees are isolated because their interests and tastes are more cultivated and refined than those of their employer whereas others are socially isolated because they are less refined. Common interests and similar tastes may be coarse and crude upon the part of both employer and employee or cultivated and refined.

**Exhausting hours.** Another objection to the resident or living-in plan is that the employee is on the premises twenty-four hours per day and is therefore subject to call at almost any time. Many employers are thoughtful and good enough managers to arrange a fair working schedule and stick to it. With them there is never any imposing upon a willing worker. In other households there are employers who when a friend telephones, just before the employee's time off, will invite the friend out to a meal and ask the employee to stay in without extra compensation, sometimes without even a "thank you." In such cases the employer has been known to argue that the work of her house is easy anyway, or that she as home-maker doesn't have regular hours, both of which are beside the point and unfair. "Easy" is the home-maker's interpretation, and her regular or irregular hours are hers and her family's responsibility, not the employee's.

**National standards.** A National Committee on Household Employment recommended that *the total actual working hours shall not exceed a maximum of sixty working hours a week; or fifty-four or forty-eight where agreed upon.* They defined actual working hours as "hours of duty during which the worker is not free to follow his own pursuits." It would include cooking, serving, cleaning, washing, ironing, marketing, going to a park to play with a young child, swimming with an older child, bringing a child home from school, feeding a child, reading to an invalid or aged person, and so on.

"*Time on call,*" this committee defined as "*that time when the worker is not free to leave the house but may rest or follow his own pursuits. Two hours on call shall be considered*

*equivalent to one hour of working time.*" She is at liberty to go to her room to read, write, listen to a radio, knit, mend or do other work for herself, but she is not free to leave the house, nor to go to sleep since she is responsible for answering the doors or telephone, answering the call of a child who may have been put to bed for a nap, or taking care of an invalid.

*"Hours entirely free are for the worker's own personal or business life. The time when the worker is entirely free from any responsibility to employer or job."* She is free to leave the house, or if she stays in she has no responsibility, not even to the extent of answering the door or telephone. In other words, she has no more job responsibility than she would have had she gone to visit a friend ten miles away.

Emergencies occur in homes, and interested employees are usually more than willing to help meet such situations. An emergency has been defined as *unexpected*, a situation *that cannot be planned*, and *does not recur regularly*. Serious accidents often represent emergencies. An emergency is very different from delaying an employee, who has arranged a dentist's appointment, in order to get lunch for a friend who telephones just before lunchtime.

*"Time off,"* this committee recommended, "*should be two half days a week beginning not later than 2 P.M. on the week day and 3 P.M. on Sunday, or one whole day a week.*

*Vacations. One week with pay after the first year's service.*"

**Work schedules and time arrangements.** The two time arrangements for a "living-in" position show different situations in the household. In one case the employer is herself employed outside her home; in the other she does part of the household work. Each is based upon an actual household. Both involve the general household worker. They show how by planning together, it is possible to work out a schedule that permits the worker to give service, but to do her work within an eight-hour active working day. The employee should understand not only what work is to be done, but how her employer wishes it done, for this will influence the amount of time to be allowed for each task. To know how much a worker can

be expected to accomplish in a given time it is well to test the working time, being careful to work at normal speed, and after the worker is familiar with the job.

By working through jobs one becomes aware, too, that the method for doing some is important chiefly from an esthetic standpoint. For example, food might be eaten from clean paper bags, thus eliminating table service, were it not for the pleasure of beautiful china, clean, well-designed fine linens, and leisure to eat. These are home-making values that some employers want and are willing to pay for. Being gracious may take time also; nevertheless home-makers feel that it is worth while to answer doors and telephones with a well-modulated voice and take time to use a pleasantly intelligent manner. It may also take time to be courteous and considerate of all members of the household, but it may be considered worth while. By imagining oneself the employer one can easily realize that time allowances must be made for esthetic standards in home-making. If employees are asked to use fine china and linens, to serve two or more courses of a meal graciously, additional time must be allowed the employee for this standard of work. She is giving service though she is not turning out a volume of products.

#### AN ILLUSTRATIVE SCHEDULE

Employer is herself employed away from home. Employee has housekeeper responsibilities.

6:00 to 7:00	Prepares and serves breakfast.....	1 hr.
7:00 to 7:30	Eats own breakfast	
7:30 to 8:00	Washes dishes .....	½ hr.
8:00 to 12:00	Own time or "free time"	
12:00 to 12:30	Eats own lunch	
1:30 to 2:30	Plans dinner and markets.....	1 hr.
2:30 to 4:30	Time-on-call (counts as one hr.).....	1 hr.
4:30 to 7:00	Dinner (preparation and service).....	2½ hrs.
7:00 to 7:30	Eats own dinner	
7:30 to 8:00	Dishes .....	½ hr.
8:00 to 11:00	Time-on-call with children of grade-school age while parents are out	1½ hrs.
		8 hr. day

Twelve-room home of physician, five in family, including a baby less than a year of age, one household employee. Household equipment includes washing and sewing machines, mangle, electric iron, vacuum cleaner, electric refrigeration, gas stove with controls, electric mixer, and kitchen ventilator. Entertaining done in home.

## EMPLOYEE'S SCHEDULE

*Tuesday*

6:45- 7:15 Prepare breakfast  
 7:15- 7:45 Make beds  
 7:45- 9:00 Clean up kitchen  
     Eat own breakfast  
 9:00-10:30 Vacuum and dust  
 10:30-11:30 Iron  
 11:30- 1:00 Prepare lunch and wash dishes  
 1:00- 3:30 Iron  
 3:30- 5:00 Own time  
 5:00- 6:30 Dinner and wash dishes

## EMPLOYER'S SCHEDULE

*Tuesday*

7:15 Breakfast  
 7:30 Take husband to train. Baby goes too  
 7:45- 8:00 Pick up on first floor  
 8:15- 8:30 Comb children's hair for school  
 8:30- 9:30 Make formula, vegetable feeding, cereal feeding  
 9:30-10:00 Bathe baby  
 10:00-10:30 Feed baby and put to bed  
 10:30-12:00 Market or mend. Do baby washing  
 12:30 Baby awakens. Take out doors until 2:00  
 2:00- 2:30 Feed baby  
 3:00- 4:00 Baby sleeps  
 4:00- 5:00 Take older girls to library. Music lessons, etc.

Tuesday is representative of a daily schedule. During the week change of work is scheduled according to the following plan.

Washing on Monday

Ironing on Tuesday

Clean ice-box }  
 Shine silver } on Wednesday  
 Wash windows }

Clean upstairs thoroughly on

Thursday A.M.

Clean downstairs on

Friday

Bake on

Saturday

**Amount of work.** It is evident if you have studied the preceding chapters that the house and the way it is planned, furnished, and equipped will determine in large measure the amount of time needed for work. Strangely enough it is possible to work harder and be more tired in a small house than in a large one when the work is poorly planned, friction exists between employer and employee, or the employee is an awkward worker. Then too, the standard of service demanded makes a great difference. Many employers who will not take the time to use table cloths, fine china, and beautifully polished silver when doing their own work want employees to use them, but fail to take into account the extra time needed for it. In estimating the size of a job, one must take into consideration such factors as the following:

**Number of rooms and their arrangement.** A large house implies more work than a small one, yet other factors may make the job of the small house less desirable than the large.

The awkward floor plan A of Figure 11, page 253, shows how many extra steps a worker was obliged to take in doing the daily routine tasks of housekeeping. The improved plan shows how the space was later planned to better advantage.

Thoughtfully planned kitchens make work easier. The kitchen (see Figure 3) between the dining-room and breakfast room is planned for the size of the house and the amount of entertaining done. Care was taken in planning to provide for all the daily and occasional work that might go on in it. The refrigerator stands near the door to the breakfast room and is also near a shelf where groceries are received when delivered from the market.

Little walking or reaching is needed to use cupboards, work surfaces, sink, and refrigerator.

**Amount, kind, and condition of equipment.** Look at Figure 6 again. The shelves, cupboards, sliding work boards, ventilator, electric clock, mixer, cookie and bread containers, and enclosed space for garbage receptacle are planned for convenience.

Laundry tubs, sinks, and tables, when of awkward height,

worn out brooms, brushes, and household machines, dirty and inadequate cleaning cloths add to the burden of housework.

See Figure 10, page 235, for milk and grocery receiver. Refer to Figure 3, page 207, for an illustration of the convenience of putting equipment near the place where it is used. Figure 1, page 205, shows how workers vary in height and suggests the back strain occasioned for the taller.

**Atmospheric dirt.** Atmospheric dirt calls for constant cleaning. Soot, fat from frying foods, sand, and dust are among the kinds that make it necessary to clean woodwork, pictures, and furniture. Much of the cost of keeping a house clean traces back to the atmospheric dirt of the community.

**Community services, such as delivery of milk, groceries, etc.** Without delivery service the employee's time may be used for marketing. Delivery of groceries that have been prepared to the point of being almost ready to serve; meats, fish, and fowl ready for broiler or roaster; bottled milk and cut bread means that much household service of an earlier day has been transferred to the grocery, market, dairy, and bakery. Communities differ widely, however. In some small towns the household worker must still be able to kill, dress, roast, and serve a chicken.

**Size of family and dependency of members.** Age, number, and interests of family members influence the size of a job. Families vary greatly in age as well as personal habits and attitudes toward employees. Every member should respect the person who does work that makes a household more comfortable and livable. Assignment of work should come from one person, the home-maker or paid housekeeper. Children should never be given the right to dictate to an employee since they cannot be expected to exercise judgment as to what is or is not a fair work day.

Children, however, may be taught to lighten the employee's schedule. The habits of members of a household help to determine the amount of work an employee may be called upon to do. When a single worker is employed for a household of several members, a plan should be worked out whereby each

assumes certain responsibilities. Children may be taught to do their share.

**Standard of service demanded by employer.** This may be elaborate and formal or simple and informal. A formal standard of service adds to the work of an employee. Not only is the serving time increased, but also the dish-washing, since more china is called for in formal service.

Sitting at the table long after dinner delays dish-washing and lengthens the working day.

**Number of meals served.** Some households operate on a schedule of two rather than three meals daily. Others not only have early breakfast, noon lunch, and six-thirty dinner but four o'clock afternoon tea as well. In other homes milk and crackers or sandwiches are served to children after school. Each meal adds preparation, service, and dish-washing time that should be considered in making out schedules.

**Household job an evolving one.** One very difficult problem in connection with the measurement of a household job is that the home, as a social institution, is an evolving one. New furniture that must be cared for is added, guests come or members are permanently added to the group with little thought to the responsibilities that each entail. In a growing business additional employees can be added since their labor makes the business even more active and profitable. In a home the reverse is likely to be true.

**Ability of home-maker to analyze job and organize work.** It is a well-recognized fact that more can be accomplished with the same expenditure of time and energy when a schedule is so made that the worker can proceed in orderly fashion from one job to the next. She is not constantly retracing her steps or doing part of the work twice because she awkwardly did the last part of the job first. The employer who thinks first of one job and then another can easily make a day of little accomplishment, long in time and wearisome.

**Ability of worker to plan and execute work.** The worker who does not know how to do a job is in no position to plan the way to go about it. Getting first one tool and then another

for cleaning wastes time whereas having all in a basket or kit, clean and ready to use, lightens the job, and speeds up the work. Knowing how to prepare different foods and having a menu and market list makes the preparation of meals easier.

**Number of interruptions.** For the general worker who may be busy washing, making frosting for a cake, or serving a meal, telephone and doorbell calls are an interruption and lengthen the working time, possibly spoil the frosting, or leave the family waiting for food. For a second maid or butler whose time is planned for this work, it cannot be regarded as an interruption.

**Living conditions.** Housing or the living conditions provided for a household worker are the responsibility of employers when the worker must live on the premises. Some employers expect the employee to occupy a room in an unfinished attic that is too hot in summer and too cold in winter. Others provide only a poor space with little privacy in a basement or part of a child's room. Floor plans even in houses of modern planning are notorious for their poor arrangement of space designated as "the maid's room."

Employers who require employees to be resident should want self-respecting workers who insist upon at least a clean, comfortable bedroom with proper provision for the use of a family bathroom, a private bath, or one shared only with a child or possibly an aged member of the family. In addition she needs the use of a room other than her bedroom in which to entertain friends. See Figure 1, page 133, of Chapter 4. Employees worthy of housing in good homes should not expect to have guests who would be in any way dangerous or obnoxious to the house or household, for it is the duty of employees to take responsibility for the good care and management of households where they work.

**Housing as part of the wage.** Housing, meals, and the privilege of including personal laundry in the family wash must be considered as a part of the "living-in" wage. This is a consideration to both the employer and employee. The employer may have a spacious house with an otherwise unoccu-

pied room where it is hard to assign a definite cost, or the family may be in the situation of renting an apartment where the price per month is in large part based upon the number of rooms in the apartment. For example, if the monthly rental of a four-room apartment is \$80 and of a six-room, \$120 in the same building, the rate per room is obviously \$20. The room for the employee is likely to be less desirable and hence less valuable, however, than the living-room or master's bedroom. Furnishings, light, and cleaning are additional cost items to figure.

The employee who "lives-in" must figure that whatever wage is paid is in addition to maintenance. She will have no room rent, transportation to and from work, food, or laundry bills. Some employers who wish a certain kind of work dress or uniform to be worn supply it, thus reducing again the employee's expenses for maintenance. Because there is no actual handling of money for these items, many employees fail to realize how much it may mean. Two sisters, one clerking in a store at \$12 per week, the other doing general housework at \$8, were surprised in comparing notes to see why the one on the \$12 salary had great difficulty living on what she earned while the other saved money regularly without much planning. Though the money wage for a "living-in" household position may not be as high per hour or per day as the "go-home-nights" or non-resident job, it frequently pays better in the long run. When employers are fair enough not to impose on the free time of workers merely because they are in the house, and when workers have a sense of responsibility to employers, satisfactory resident arrangements are possible.

Where large individual houses are occupied, the home-maker who employs labor has the responsibility of planning for the mount and kind that will be used. She has the problem of finding the person or persons whom she wishes to have live in her house if she employs resident labor, as well as the task of analyzing and planning her work afterward unless she employs a housekeeper whom she pays a housekeeper's wage and who assumes a housekeeper's responsibilities.

**Building management of household labor.** Many persons responsible for homes are annoyed with the problems of household labor. They are not interested in dealing with workers; they have no interest nor ability in teaching; and they do not understand the work of their homes. Some are business and professional people busy with work outside. For persons who want the advantages of individual homes and the comforts provided by paid labor without the ordinary responsibilities of an employer, schemes of management in multiple or compound housing can be developed. In large buildings of many apartments or in organized communities of individual houses, departments of employment can be established that will contribute to the benefit of both employers and employees.

Such departments are not employment agencies, for their efforts are confined to the single building or community they serve. They take over the responsibility of engaging and teaching workers much as is done in hotels. To the extent that they serve a large rather than small group of households, it is possible to provide trained employees for specialized work. That is, a worker may be employed through the office of the building, and individual employers may arrange for part-time labor through the same office. The office is responsible for employing honest workers and for training them, when necessary, to hold their work. Likewise the office is responsible to tenants for a definite amount of labor of a recognized standard. The cost of the labor employed is added to individual householder's bills, and employees are paid by the week or month as agreed upon. Such a plan has a number of possible advantages. First, it provides for more specialization of labor. The general household worker who must wash, iron, cook, waitress, look after the furnace, sweep the walks, and take care of the baby, under a plan of specialization devotes her time to the kind of work she likes best and can find. The person who cleans well may fill her time with a schedule of cleaning for several employers instead of one. Since all work is within the building a minimum of time will be lost in going from place to

place. Her efficiency and rate of pay should be higher than it would be for all the jobs of general work.

The persons who cook and serve especially well may be kept busy serving for different employers who entertain, or may be regularly employed in one or two households large enough to require paid labor. Some home-makers prefer to do their own cooking but want help in serving the meal, washing the dishes, and leaving the kitchen in order; others who prefer to eat in the privacy of their homes, but cannot or do not want to cook and are home for only a few meals of a week, are willing to pay a higher rate for part-time service than to keep a resident employee. Some buildings with kitchen and dining-room service in the building arrange to supply prepared food and a waitress to individual apartments.

Part-time or hourly labor commands a higher rate of pay but has the serious disadvantage of being irregular unless there is some means of working out schedules. The worker is unable to figure what income to depend upon. Then too, there is loss of time in going from job to job. With the large demand for different kinds of service that exists in large apartment buildings, for example, it is possible for the management to supply full working schedules to employees. By collecting payment from employers at the desk, the payment of wages can be guaranteed to workers. Also such a desk should be prepared to explain to employers what it is reasonable to expect from any employee. Within a building there is much more uniformity in size of apartments, equipment, and standard of living than for society at large; hence a service desk within a building could help to establish better standards of work and working conditions. Where residence on the premises is required, decent rooms or apartments for the worker ought to be provided.

To tenants or employers such a service can be not only a great convenience and saving of time but also a means of supplying honest workers who give a better quality of service. It should be the responsibility of a service desk that aims to provide labor in the building to select, train, and supervise as

is done in large stores. In stores the management expects to assume this responsibility and clerks expect to be trained.

**Permanency of domestic labor problem.** There will continue to be the individual householder who chooses to employ labor for her home. This labor may be in the form of the resident general worker, specialized worker, or part-time employee. She may buy labor as a part of ready-to-use products, or machines may be used to do part of the work. Forms and conditions of labor change. Household labor is ancient indeed. It has been known for thousands of years, and there is little doubt that it will continue as long as houses and apartments are large, and families choose standards of living that call for paid labor within the home.

#### HOUSING AND THE PURCHASE OF LABOR

<i>Forms of Housing</i>	<i>Kinds of Labor</i>	<i>Forms in Which Purchased</i>
Single Cabin Bungalow Single detached house (Cottage type or large)	Care of house Sweeping Dusting Waxing furniture, floors Polishing metals Washing mirrors, win- dows, woodwork Sweeping porches, walks Bed-making Answering telephone and door bells Apartment-hotel desk service Decorating (painting, papering, etc.) Storing furniture or furnishings not in immediate use Closing cottage at end of season; house be- fore a vacation Informal guard service (Protection of prop- erty)	Commercial Dry cleaning Rugs Draperies Furniture Furniture covers Blankets Down puffs Pillows Non-washable spreads
Multiple Semi-detached (Joined by cen- ter wall only)		Laundering Glass curtains Table cloths Napkins Doilies Bath towels Hand towels Glass and dish towels Dish cloths Pot holders Dust cloths Clothes bags Personal clothing
Duplex or two apartments		
Apartment (varying sizes)		
Apartment hotel (Hotel services added to apart- ment building)		

HOUSING AND THE PURCHASE OF LABOR (*Continued*)

<i>Forms of Housing</i>	<i>Kinds of Labor</i>	<i>Forms in Which Purchased</i>
	Being on premises Turning lights on and off Answering door and telephone Opening and closing doors and windows, etc. Exterminating insects, animal pests Appraisal (Inventory and evaluation) Professional account keeping and budgeting Firing furnace or stoves	Storage Furniture storage warehouse Bank vaults Labor in ready-to-use articles Furniture China Ready-made draperies and glass curtains Shades Rugs Sheets Towels Table linens Canned foods Cooked meats Pastries Bread Butter Bottled milk and cream Cheese Ice cream
	Gardening Mowing lawns Raking leaves Spading Fertilizing Planting Mending fences, etc.	Domestic labor on premises Resident Part-time Guarding and care of property
	Laundering Household articles Personal garments	Institutional Nursery school Kindergarten School Supervised playground
	Dry cleaning Household articles Personal garments	Domestic or private household employee Infant nurse Nursemaid Mother's assistant Tutor Governess
	Preparation of food Care of children	

**Need for intelligence.** Employers should realize that general housekeeping and general household labor are highly complicated and demand a high degree of skill and job intelligence if workers are to be asked to assume many responsibilities. Successful workers should receive respect as well as a wage. For full responsibility the household employee should be paid a housekeeper's wage. Helpers or employer's assistants who are given a low wage should be expected to do only definite jobs, and these often with help. The home-maker who cannot afford to pay for skilled labor should be prepared to teach an employee, remembering that demonstration with explanation is the clearest, most satisfactory way to teach simple jobs, and that patience, persistence, and a sense of humor are essential to all types of successful teaching.

The outline that follows presents concisely a suggestive outline of household labor. After discussion expand the list with details that are missing.

### *Free Advice—Help Yourself*

#### FOR EMPLOYERS

##### I. SET A GOOD EXAMPLE.

- A. Treat your employee with the same courtesy and respect you expect of her.
- B. Respect her right to a clean comfortable room and as good food as that sent to the table. Bologna at a picnic is acceptable but produces a bad feeling when supplied for the employee in the kitchen while the family eats a sirloin steak in the dining room.
- C. Respect her right to friends of her own. Either allow time for going out or provide a space for entertaining in the house. Take an interest in her friends but *do not supervise or dictate.*
- D. Respect her rights to hours. It is not so much the actual number of hours, for many workers willingly exceed a fixed number when there is no feeling that the employer is taking advantage. Interest in the job is *one secret of contentment.*

- E. Speak courteously. Never shout or command.
- F. Have a functional plan for managing your household and help your employee to feel she is participating with you in carrying out the plan.

## II. BE HONEST.

- A. About the health of family members. If they are ill, say so that the employee may be in a position to protect herself.
- B. Pay promptly the full amount agreed upon. Have a regular date or time for paying.
- C. Never try to pay your employee with old clothes or furniture. Either give it away or sell it for whatever a second-hand dealer would pay.
- D. Never borrow money or other things from employees.
- E. Do not permit children to borrow from employees. It easily involves them in falsehoods.
- F. At the time of engaging a new employee *do not make promises that you cannot* or *do not intend* to keep.
- G. If she has been a good employee, give a good recommendation when she wishes to get another position that may be better than yours. Preserve your own self-respect by being a good sport.

## III. REMEMBER YOUR TEACHING RESPONSIBILITY.

- A. Demonstrate and explain, don't complain.
- B. Try to interest the employee in the job so she will think in terms of responsibilities.
- C. Exercise patience in repeating explanations.
- D. Develop a sense of humor.
- E. Be kindly and friendly without being intimate.
- F. Be truthful in criticizing work. When it is good, say so frankly; when poor be honest also. Criticism can then come to represent the quality of the work and is less personal.

## IV. CREATE GOOD WORKING CONDITIONS.

- A. Have necessary tools and equipment.
- B. Have them in order and kept where easily found.
- C. When you have made a working schedule stick to it.
- D. *Never* permit children to give orders to employees.

- E. Ask all adults to put their requests through the hands of the home-maker or person responsible for directing the work of the employee. It is impossible for one worker to serve several masters well.
- F. Friction tires. Prevent it, and save your own as well as the worker's nervous energy. Avoid fault-finding and nagging.
- G. Remember that playing with children is work for an employee. She may be interested enough to enjoy it, but it is her work, for it prevents her from earning in another job, going to school, or following personal interests.

#### FOR EMPLOYEES

- V. BE ATTRACTIVE IN APPEARANCE.
  - A. Be clean and neat.
  - B. Wear clothes appropriate for work.
  - C. Guard your health.
- VI. BE COURTEOUS.
  - A. Wear a pleasant expression—avoid all appearance of grouchiness and discontent.
  - B. Take criticism kindly and correct your faults willingly.
  - C. Show no favoritism toward any member of the family. Avoid forming strong personal attachments for certain children of the family—treat all alike.
  - D. Use mannerly expressions.  
Don't forget to use the expression, "I beg your pardon," "Excuse me, please," "Please," "Thank you," etc., or "I am sorry that happened, Mrs. Smith. I will try to be more careful."
- VII. BE DIGNIFIED.
  - A. Stand erect.
  - B. Use a low, pleasant speaking voice.
    - 1. Never raise voice to demand obedience from children.
    - 2. Never call hostess to announce guests. Go to her and inform her quietly of their arrival. Never call

to announce a telephone call so that your voice may be heard through the telephone.

3. Answer telephone in a clear, distinct manner. Do not answer, "hello," as your voice may be unrecognized, and the person calling will think it is the wrong number.

Answer, "This is the Smith residence—I will call Mrs. Smith to the telephone," or "Mrs. Smith is busy. Who shall I say is calling?"

4. Avoid use of slang—loud or boisterous talking.
  5. Practise using good English. Ask employer to correct you and thus help you get the habit of using good English.
- C. Do not offer alibis for mistakes—merely say you are sorry.
- D. Be friendly, but not familiar—"Familiarity breeds contempt."
1. Do not discuss yours or your family's affairs with your employer's family.
  2. Take no interest in your employer's family affairs.
    - a. Avoid seeming to loiter about rooms or eavesdropping.
    - b. Take no interest in the conversation of the family unless it is directed toward you.
  3. Never stay in the room where the hostess is entertaining guests.
  4. Never enter into a discussion between members of the family and guests by offering your opinion or telling of your experience.
  5. Do not strive to be treated "as one of the family." You may be treated with the same disrespect and unkindness with which members of families often treat each other. Members of families may soon forgive and forget, but this is not so easy toward outsiders.
  6. Do not enter family circle unless invited to do so.
    - a. Improve yourself by reading, writing, or sewing in your own room while members of the family are together in other parts of the house, unless you are invited *at that time* to join their circle.

- b. Husbands and wives get to see each other a very few hours each day and prefer to be alone so they may discuss private business or home problems.

#### VIII. BE EFFICIENT.

- A. Take pride in doing your work thoroughly.
- B. Desire to learn new and better ways of doing things.
- C. Make a plan for your day's work and your week's work. Do not allow telephone or backyard visits to interfere with these plans. Do some part of weekly cleaning each day.
- D. Conduct your work quietly.
  - 1. "Be seen and not heard." Most housewives become very nervous by having some one around them who talks and visits while she works. Do not hum while working. If you sing be sure your employer has good nerves and is not bothered.
  - 2. Move quickly and step lightly—wear rubber heels.
  - 3. Close doors and windows without making a noise. Don't make those around you "jittery."
  - 4. Avoid rattling dishes and cooking utensils.

#### IX. BE LOYAL.

- A. Repeat nothing of personal nature which you may see or hear in the home.
- B. Do not discuss their home management, furnishings, cleanliness, family troubles, etc. with any one. Your friends will not feel they can trust you either if you discuss the personal affairs of others.

#### X. BE RELIABLE.

- A. Report promptly for work. Send word to employer if sickness prevents your reporting for work. Do not stay away from work unless it is impossible to come.
- B. Be willing to coöperate and help in emergencies.
- C. Do not leave your employer without discussing with her your reasons for leaving and giving her a week's notice.

#### XI. BE HONEST.

Never do anything which may cause any one to doubt

your honesty. Never carry anything away from the home—or use anything, such as her powder, rouge, etc., no matter how trivial it may seem, without getting the employer's consent. She may be glad to give you some article which is no longer of value to her, but taking the article without her permission would be dishonest. One little dishonest act will spoil your chance of being recommended for another position. An undiscovered, dishonest act will lead to greater ones as dishonesty is a habit which grows rapidly. Can you afford to be dishonest?

## XII. BE RESPECTED.

Gain the respect of your employer by being honest, reliable, loyal, efficient, dignified, courteous, clean, and appropriately dressed. Protect your health.

### SUGGESTIONS FOR STUDY

1. Suppose that A is a general household worker who knows how to wash dishes, cook, serve a table, make beds, clean, and do laundry work. Describe the type of teaching an employer should still expect to do?

2. Choose a group of floor plans and see how large houses or apartments are likely to be in which there are rooms designated for the use of household employees.

What type and about how much cleaning of rooms is indicated? About how much bed-making? What kind of table service? How much laundry work?

What living space is designated for the household worker?

3. Choose a house familiar to the class and study it for working conditions.

Are tables, laundry tubs, ironing boards, stove surfaces at comfortable working heights? How could equipment at tiresome heights be adjusted for comfort?

How well is equipment organized for work, that is, are workable, sink, stove, and refrigerator close together or distributed on different sides of a big kitchen or in kitchen pantry and store-room?

Is there provision for keeping cleaning supplies on the second door if the house is large?

What kind of equipment is provided and is it in good repair?

What services in the community will likely affect the kind of work to be done by an employee in the house?

Does the house and community indicate that elaborate entertaining may be done in the home?

4. Imagine that you have the problem of earning a living and instead of clerking, typing, or industrial work you choose house work. Describe the way you might plan a day, and the way you would go about your job to give service within an eight-hour day. List some of the types of questions you might want to ask of an employer when establishing both a daily and weekly routine.

## 9

## LOCATING AND PLANNING A PLACE FOR A HOME

WHERE one builds, buys, or rents a home will determine in large measure how one can live; what view there will be, what air will be breathed; how much sunshine there can be, what kind of storms may be expected; what local building materials can be used; what kind of water can be had to drink, bathe in, and keep the house clean; what kind of stores, shops, and offices will be found; what kind and how many schools, and churches, will be available; what parks and recreation centers will be at hand; or what woods, mountains, streams, and prairies will be open to nature lovers; what apartment-building services will be included as a part of rent; and what neighbors one will have. Location is of no small importance, for with location one at once acquires an environment. It may be one that forces persons with high standards of living to struggle desperately for the most meager comforts or one so rich in services that individuals accept them without thought or appreciation. Over the United States there is wide variation in possibilities for living as determined by the location. Areas rich in the beauties of nature or such natural resources as minerals, oils, and farm produce may be poor in social opportunities and communities poor in natural beauty and resources may be rich in possibilities for constructive social living. Some modern housing projects are so extensive that they represent a community within a city or local area and when well managed with the intelligent coöperation of tenants or home owners

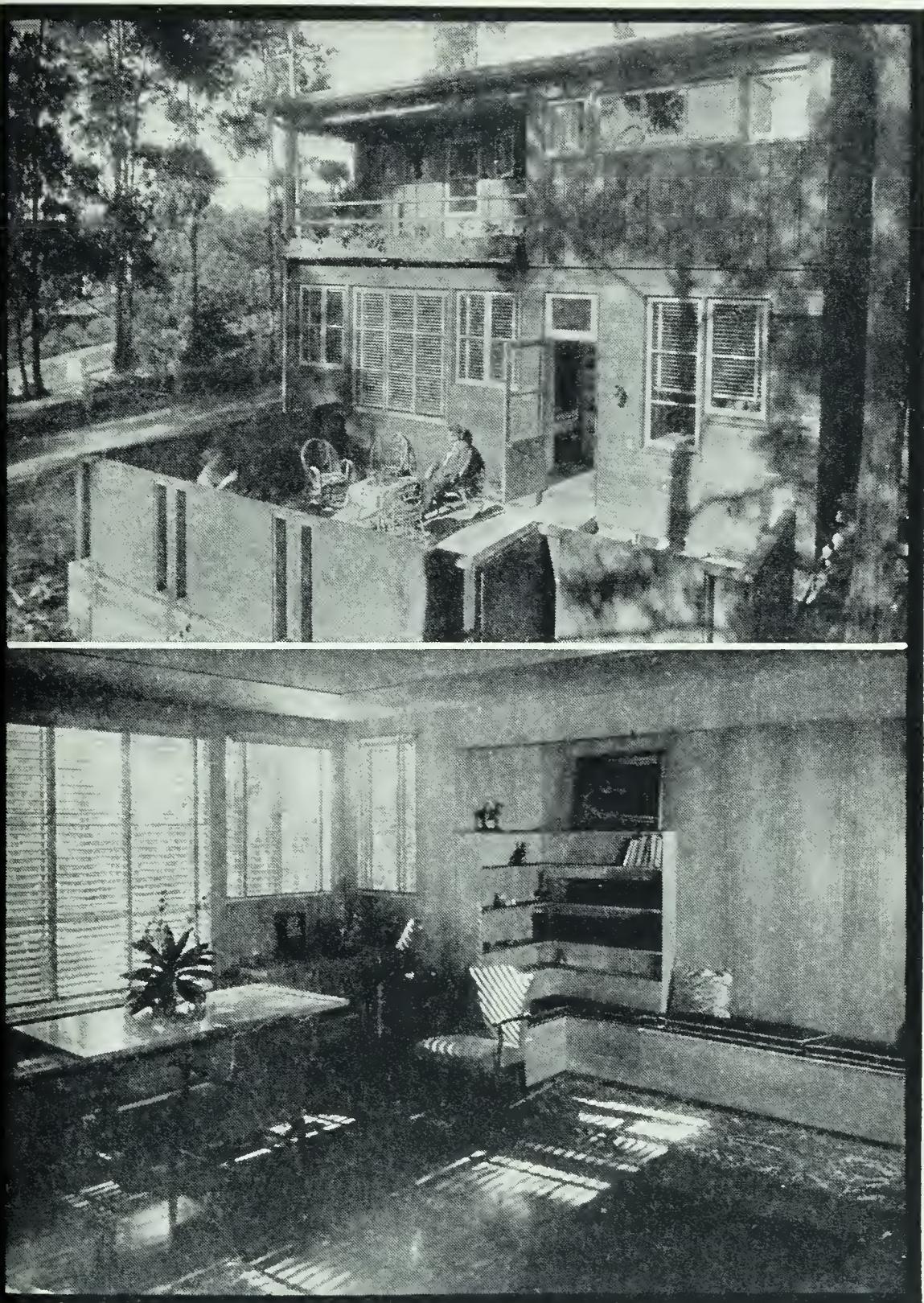
furnish an excellent illustration of rich social and educational possibilities even within a slum neighborhood.

1. Have you ever considered why you live in your present location?
2. What natural resources has it?
3. To what extent is the family income related to the location in which you live?
4. What kind of social advantages does it offer?
5. What do you contribute to the social life of the community?
6. List the kinds of educational advantages offered in your community? From how many do you profit?
7. What types of residential buildings are most common where you live?
8. In what way does location influence the plans for residential buildings?

Save your answers to these questions and after reading the chapter correct or expand them upon the basis of your reading and study from other sources. Undoubtedly you will find it useful to discuss these questions at home as well as in class.

**Freedom and limitation of choice.** With the exception of a very small number of persons every one has definite limitations as to where he may choose to live. Work and business interests more than other considerations determine the specific urban or rural location. In general home-makers live where their husbands work; children go with their parents. Exceptions occur when the living conditions for children are such that parents feel it unfair to try to keep them at home and the parents are able to find suitable boarding schools or homes elsewhere. However, when it is possible for persons to perform the same type of work in different places, the more pleasant place for living is likely to have the preference.

Health in a limited number of cases is the determining factor in choosing the location for a home. Because of the favor-



*Courtesy of Michael Goodman, Architect.*

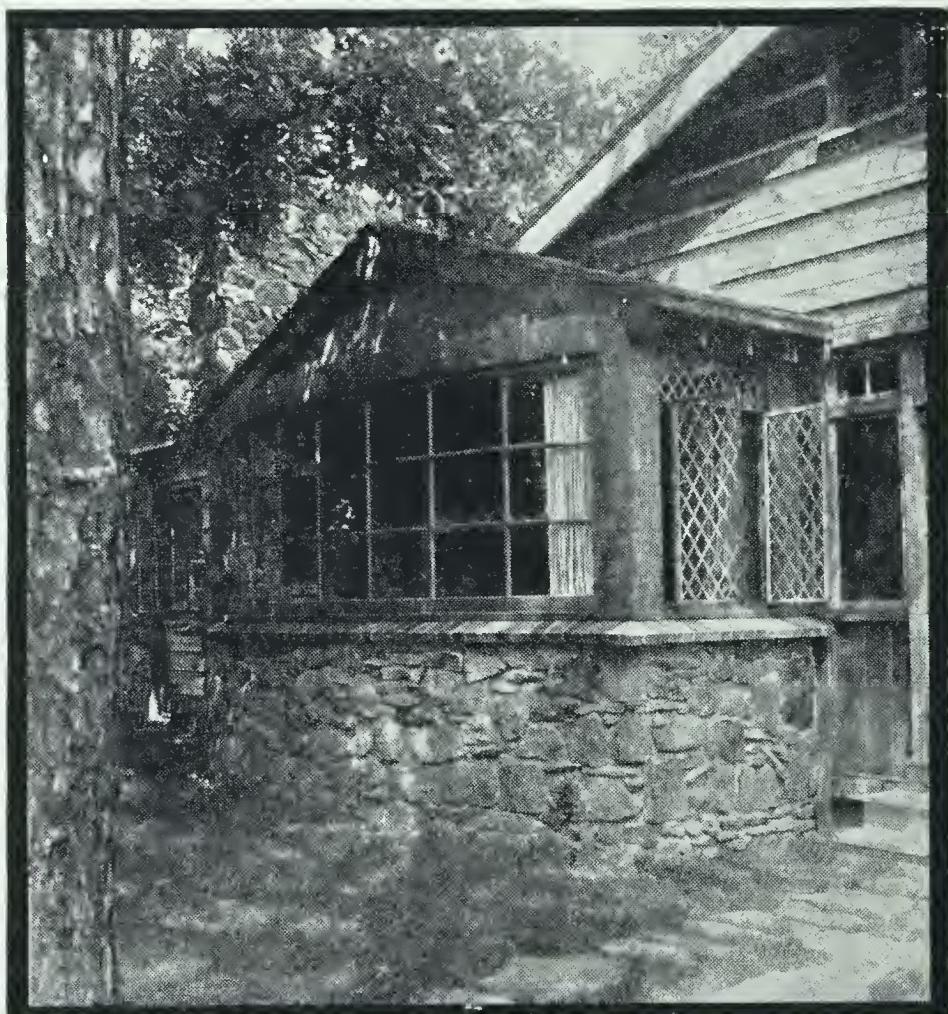
Fig. 1. A California house.

The shadow cast by a neighboring house, and the clients' desire for a garden and a view of the Golden Gate, dictated the location of this studio-type house on the corner of the lot nearest the sidewalk. The protected patio creates privacy and permits outdoor meals. The interiors conform to the modern trend of built-in details to increase the size of the room."—

*Architectural Forum*, April '36.

able climatic conditions of temperature, clean air, and sunshine certain parts of the United States have grown famous as health resorts and home locations for persons who have retired from active work.

In general, however, choices of state or city location are



*Courtesy of Henry Irven Gaines, Architect.*

Fig. 2. In building this lodge in the great Smoky Mountains, native stone and lumber were used.

conditioned by employment. What freedom one has is a local problem and will depend in large measure upon the building already available in relation to the individual family needs and income. If good sites are plentiful and building conditions favorable enough, new construction may be stimulated. In some cases it is advisable to modernize substantially constructed old buildings.

**Friends.** Many persons are influenced in their choice of a place to live by friends who are already living in a com-

nunity. Obviously it is an entirely personal decision whether one chooses to sacrifice building values to live near friends. To some persons proximity to friends is so desirable that they are willing to accept inconveniences and housing hardships; to others functional building is so important that they will seek locations at some distance from friends if need be.

**Site.** Building site refers to the ground on which a building or town stands. Whether one is selecting vacant or improved land, there are ground values to be considered by those who plan to live on it. It may be part of the open country, a village, town, or city. As ground, it is responsible for good or poor natural drainage and support of vegetation, such as grass, shrubs, or trees. In addition it may furnish building materials in the form of native stone, logs, or sand for cement. See Figures 2, , also page 139, and portfolio sections. It likewise is responsible for the protections that must be built into houses, such as protection from extreme heat or cold, tornadoes, earthquakes, rain, snow, lightning, or floods.

A list of thirty things to buy besides frontage shows the kind of values one may buy with a location. Illustrations of this chapter as well as the following give a view of some of these values in concrete form.

#### THIRTY THINGS TO BUY BESIDES "FRONTAGE"<sup>1</sup>

If you want to base your home-building project "on solid ground," literally as well as figuratively, you should "look beneath the surface" of the real estate deal—figuratively as well as literally!

A home is more than just a house. By the same token, a proper home site is more than just so much dirt. It may or may not have the qualities that make it desirable as a permanent location for dwelling, and profitable as an investment in real property. So here is a list of thirty items by which to judge whether the place you are thinking of buying is mere real estate or a good home site:

<sup>1</sup> In *Small Home* (Architects' Small House Service Bureau, Inc.), January, 1927.

1. Buy the knowledge of a dependable real estate expert; that is, patronize a dealer of high standing in the community.
2. Buy an appraisal. Consult a second disinterested real estate man or a professional appraiser and pay him his relatively small fee for making an analysis of the value of the property before you purchase it.
3. Buy an absolutely clear title. You may require the seller to establish his title to the property before you buy it, or you may employ a lawyer or a title guarantee company to search the title for you. This is vitally important and is worth the expense.
4. Buy exact boundaries. Don't take the seller's word as to property lines, but see that they are accurately established at the time when the title is searched.
5. Buy sunlight, not smoke and dust. If you are going to the trouble of acquiring your own permanent home, you might just as well have it in a location that is sure to be healthy for your children.
6. Buy exposure to the winds that prevail in summer. When looking over the lot, keep in mind the house you intend to place on it and try to see whether or not it will be comfortable.
7. Buy enough land. The minimum should be from forty to sixty feet of frontage. Old-style twenty-five- and twenty-eight- and thirty-foot lots in crowded districts are poor investments. The wider your lot, the greater your chances for a price increase.
8. Buy solid earth. In filled-in tracts, or "made" land, there always is a danger of poor drainage or a chance that the house will settle. Either settling or bad drainage will damage the structure.
9. Buy high land. This is necessary if drainage is to be satisfactory. A low-lying lot may mean a waterproofing problem.
10. Buy level land. Filling a lot to bring it up to the desired level is almost as costly as excavating.
11. Buy land of good shape. A lot of irregular outline may prove difficult to sell.
12. Buy good soil. Remember that excavating in rock may prove more expensive than you wish to undertake, that quicksand or other defects of the soil may result in damage to your house, but that under-surface sand or gravel may be an advantage if it is of such quality that it can be used for the mortar, plaster, or stucco.

13. Buy land fully developed or already under development. It is safer, though more expensive, than acreage which may be developed in the distant future.

14. Buy water and gas mains, graded and paved streets, sewers, walks, and curbs already installed, or else add the estimated cost of taxes for these improvements to the price of your lot. Property with all these utilities in and fully paid for should not cost you more than 30 per cent of the total investment you plan to make, though 20 per cent would be a much safer figure. Land without these improvements should not cost more than 10 per cent of the total.

15. Buy moderate taxation. If you have any choice as to the state, county, or city in which you intend to build your home, acquaint yourself fully with the taxing policy of the authorities and estimate what the taxes will add to the cost of maintaining your dwelling.

16. Buy good transportation to your work, church, schools, and shopping centers. Measure the distance, not in miles, but in time it takes to get there. The ideal home lot is three or four blocks from transportation lines and stations.

17. Buy good collateral on a building loan; that is, choose a lot on which a bank or building and loan association will advance you at least 50 or 60 per cent of its value. If they won't lend you more than 40 per cent you may question whether or not you are paying too much.

18. Buy fire and police protection. See that your neighborhood is well served by these city departments.

19. Buy partnership in the community. "Restricted residential districts" may serve as protection against persons with whom your family won't care to associate, provided the restrictions are enforced and are not merely temporary.

20. Buy the right to build according to your own standard of living. The building restrictions may call for a more expensive house than you can afford to build and maintain.

21. Buy a well-balanced investment. That is, don't put much more or much less than one-fifth or one-fourth of your total funds into the lot. The construction should cost you three or four times the purchase price of the land.

22. Buy a sound investment, so far as you and your appraiser can judge future values. Population and transportation are the

two chief elements in increasing home-site values. Be sure your property is in the line of residential, not industrial or commercial, growth of the city.

23. Buy freedom from easements; investigate thoroughly to find out whether or not any one has any right to lay pipes or erect poles or make a right-of-way on your lot.

24. Buy good location within the block. Remember that a corner lot may be double-assessed for streets and sidewalks and that it will require longer fences. See that your lot is such that your neighbor's kitchen or garage won't be a nuisance.

25. Buy a real share of parks, playgrounds, and schools. An ideal location is about half a mile from these.

26. Buy freedom from traffic dangers and noises. A through street may prove a menace to your children and to the daily comfort and the nightly slumber of the whole family.

27. Buy a chance at future favorable development. Examine the chances of public utilities, parks, or boulevards being brought closer to your property in the future—and then be sure that such developments would be to the advantage and not to the detriment of the property.

28. Buy "a sure thing." If at all possible, it would be well for you to rent and live in a neighborhood for a year before undertaking to buy and build there.

29. Buy beauty. Too many trees are better than too few; natural objects of beauty will save you the cost of development and will help you dispose of the property advantageously when the time comes.

30. Buy a home, not a speculation. You would accept many things in buying just to make money which you wouldn't consider if you were buying for permanence. Set your ideal high—you probably will have to modify it, but it's safer to modify a high ideal than a low one.

Of course, a home lot possessing all these thirty advantages may be more than an ideal—it may be a physical as well as a financial impossibility in your town. But these are the things you should have in mind before you buy. Don't let any one "talk you out of them."

**Transportation.** Getting to and from employment is so vital a part of both work and home living that it often becomes

a major consideration in choosing a location for the home. The small-town resident is freest from transportation problems since he can walk easily to any part of town. He may even plan to come home at noon for dinner. The farmer is free from transportation costs while he works on his farm but highly dependent when he needs supplies from the near-by town or city. Except where the farmer lives near an interurban or bus line, he is obliged to provide his own form of transportation. It may be a horse and buggy, an automobile, or even an airplane. At present we are living largely in the automobile age. Because of the peculiar geographic conditions of Alaska transportation facilities include water, snow, and air with little development of either rail or automobile roads. Emphasis is therefore upon boats and airplanes since the largest towns are along the Inside Passage where the climate is mild.

In cities and suburbs it is rare for persons to be able to live near enough to their employment to walk to and from work. At once public transportation assumes a rôle of major importance. Steam trains, electric trains, street-cars, and buses are the more common types of public transportation; however, there is much variation within the types. Electric trains may be at ground level, elevated, or underground and called "subways." No matter what the type, patrons have certain common interests. They need rapid traveling time so that only a minimum amount of the day is wasted in riding, short intervals between trains or cars so that little time will be lost in waiting, dependable service so one can be sure of being able to travel at the time indicated by the time schedule. Unless one is to be tired from the effort of travel to work, the forms of transportation must be comfortable. Overcrowded, stuffy, dirty cars or buses take toll of human energy before the day is started and send persons home at night with an extra burden of tiredness.

The cost of transportation is an item both of owning or renting a home. The person who can walk figures only in terms of time. The one who must own an automobile adds at least part of the cost of running it to his cost for housing. Those who

take a street-car daily spend a minimum of sixty cents per week, or \$31.20 per year, for five-cent fares, or \$1.20 per week, \$62.40 per year, for ten-cent fares.

**Schools.** For families with children the public schools of a town or neighborhood are a definite value of the house location. A large city housing project sponsored by private funds was designed to attract families who could afford to pay rent of from \$75.00 upward. Play yards and well-lighted basement play rooms for rainy days were provided in the building, but it was located in a part of the city where much deterioration had taken place in the public schools. Uncomfortable, dirty, portable buildings were used, and the overcrowding of grades was such that no teacher could give the individual attention needed by children. One by one the families with children of school age began moving out of the building. It was attractively planned for persons with no children, with children up to first grade, or with children of high-school or college age who were able to use transportation to and from school.

Since grade-school children spend the major portion of their waking time in school, it is of the utmost importance that adults given attention to the condition of the schools children must attend, for grade-school children cannot be depended upon to distinguish good from bad, nor are they at liberty to choose where they will go. They are likely to judge the school according to the friends they have made among the pupils and teachers.

High-school members of families may be interested in schools because of the kind of education it is possible to get through them. If they must start at an early age to help earn their living, they may be interested either in the technical courses offered in the regular high-school program, or they may find it necessary to attend a trade, art, music, or commercial school to get the specific training needed. Many large and small cities have in the high-school program courses to cover two years of college work, and large numbers of towns and cities have private and public colleges and universities. These

are of direct housing value to the family with children of college age and who are interested in the kind of higher education such institutions have to offer. Strange as it often seems to persons whose attention has not been directed to it, schools and colleges are a definite housing asset if they offer good instruction in the training needed by the school-age members of the family. Since many schools offer courses for adults, and occasional lectures and musical or dramatic performances, they may have an extended housing value to the entire community.

**City and community assets.** The early settlers of the United States found natural values in abundance for the location of homes, but the social values were entirely lacking. Only as people have developed their cities and communities for living have these social values been added to the land. They include institutions such as schools, libraries, parks, museums, or community centers. In addition, city improvements such as street paving sidewalks, water mains, sewers, gas, electricity, and telephone lines, are the result of group or community interests. For the masses of people these services are made possible through living together and sharing the cost of them.

Other services such as fire and police protection, street and park cleaning, planting and gardening in parks and along streets, trash and garbage collection, sanitary and building inspection, quarantining, municipal production of gas and electricity, are familiar city services. A less familiar service is maintained in a few cities where hostesses are employed to greet new-comers and familiarize them with both the commercial and civic services offered in the town. Not only are city handbooks of information given to newcomers but courtesy calls are made to learn their special interests and abilities and to assist them personally in becoming a part of their new home.

In the undeveloped open country people were at liberty to build as best they could and to live as was possible under primitive conditions. Often nature set strenuous conditions for the pioneers. With the coming together of people in communities where they could pool their labor or their money to

get desired conveniences, there was need for services in regulating what one person might do in relation to another. It was necessary to survey land, establish boundary lines, make and register legal instruments that would insure the rights of owners, assess and collect money in the form of taxes to pay for the group services, and make ordinances specifying what might or might not be done.

Within recent years experience has shown that individual neighbors of a community will differ so much in regard to the way they build or use property in relation to other people that building regulations and inspection are essential. One citizen may take pride in keeping up his property not alone for his own satisfaction but for the pleasure of the neighbors as well. He builds safely, he sets fences on and not over the line; if he owns a dog, he keeps it out of the neighbors' flower gardens or shrubbery; he keeps his own place free of trash and weeds and helps to keep streets and other common property clean. In other words, he has high standards for property care and neighborliness. His neighbors with poor standards may build a garage just across his lot line but under his sleeping porch and race the engine of their automobile late at night; they may let their lot grow up to dandelions or other plants that spread rapidly and are distasteful to the neighbors; they may dump garbage in the alley or on the rear of the lot, thus attracting flies, rats, and vermin. Obviously, means of regulating persons' actions and improving standards for all become necessary. City ordinances and plans for enforcement are socially very significant. But more than merely knowing regulations, citizens need to understand the value of ordinances and participate in making new ones or revising those that have gone out of date. Regulations for the control of stables and manure piles are little needed now, but education for neighborly courtesy in running automobiles or radios may be. House as well as apartment dwellers annoy neighbors with the noise of boisterous parties and blaring radios.

**Zoning.** Zoning is a comparatively recent plan for setting

aside areas of cities for specific purposes. An area may be zoned for residential purposes with quite definite standards set as to the kind of home that may be built and the use that can be made of those houses already in the area. Occasionally houses below a certain price limit are restricted. Obviously price makes for a quick but highly unsatisfactory basis for zoning residential property, for it is possible to build expensive fire hazards or unsightly structures entirely out of keeping with and dangerous to the community.

To be kept effective, zoning regulations need to be made flexible enough to provide for considerable range or freedom within the bounds of reasonable standards for safety, sanitation, comfort, and beauty. The bibliography lists three useful government bulletins to clarify the meaning and operation of zoning as an aid to establishing better living conditions. Also the bulletin, *Housing Standards*, presents a list of minimum standards for building. Establishing better standards adds to the value of property for every one.

**Influence of topography.** Topography or land shape influences the way houses can be planned and designed to fit it. Land is flat, hilly, or rolling. Among the hilly or rolling shapes there is everything from peaks and cliffs or side hills to gently rolling slopes. Peak locations are usually much exposed to weather, but may be delightful for view and sunshine. Cliffs, like peaks, add a burden to walking and usually considerable expense to building. Side-hill lots may be protected from prevailing winds if situated on the right side of the hill, but they create construction problems and add to the difficulties of growing a lawn and keeping it from washing away. Terraces with the soil held in place by low growing vines or shrubs that develop thickly matted roots, or the use of retaining walls may be necessary. Gently rolling land has the advantage of good drainage, view, and interestingly varied land shape without the serious problems of peaks or side hills. Though less easy than level ground for walking, it usually is not seriously objectionable. The illustration (Fig. 3) calls attention to some of the problems created by topography. Figure 15 at the end

of the chapter shows a design well adapted to flat land. Flat prairie land has no wind breaks except as there are trees. The diagram shows how trees may be grown for protection as well as beauty.



Photograph by Samuel H. Gottscho.

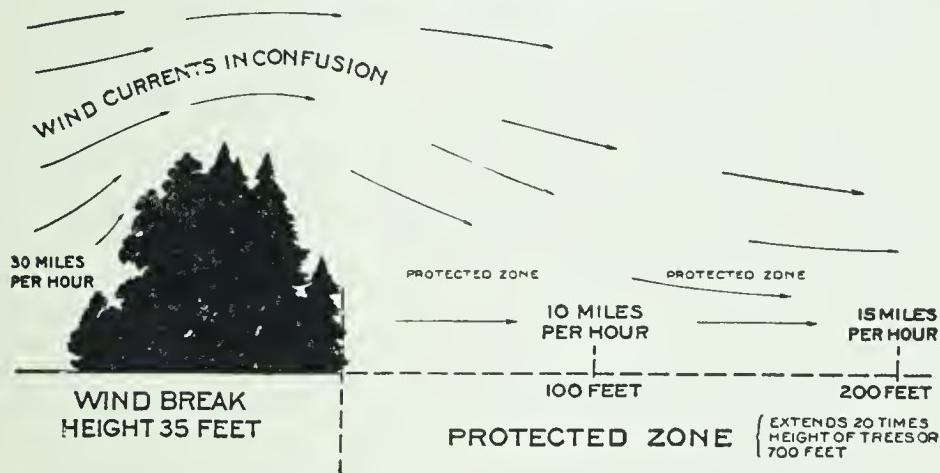
Fig. 3. Erected upon a former mill site, this residence is surrounded by terraces whose retaining walls are superimposed upon the old foundations. *Architectural Forum*, December, 1936.

**Apartment location.** Despite efforts to house families in single-unit dwellings, apartment living has increased, for apartments have a variety of advantages, particularly to families without children or whose children are fairly well grown. A few of the modern apartments give definite consideration to the life of children. Apartment advantages are largely those that result from group use of services. Construction costs are reduced because of a common roof, basement, and heating plant; maintenance costs are less to individuals because of shared janitorial services and building repairs. Group use of equipment, such as electric refrigerators, incinerators, air-con-

ditioners, gas or electric stoves, and community services such as good transportation make apartments desirable to large numbers of city people.

Like row houses, apartment buildings have too often been bleak in external appearance and crowded so closely onto land that sunlight, air, and privacy have been sacrificed. Because of the permanent demand for apartments, improvements are being made in exterior design, the use of set-backs for the

## EFFECT OF WINDBREAKS ON WIND VELOCITY



  
U. S. FOREST SERVICE

Fig. 4. The exposure of a site should be taken into consideration in planning a house

igher floors, more land for new buildings, sound-proof walls and floors, and increased numbers of entrances. Services such as passenger and freight elevators, incinerators, water-softeners, air-conditioners, service desks for the reception of groceries and other packages delivered while the tenant is away, are among the additions to newer buildings. Obviously these are values to be considered by either tenant or individual owner. It should be remembered that individual apartments as well as houses may be both purchased and rented.

For many years the floor space of store and office buildings has been so planned that it could be divided after being

leased. This plan is now beginning to be applied to apartment buildings. In a few the purchaser or tenant who takes a long-term lease may choose floor area and subdivide it into the rooms needed and permissible.

In choosing either divided or undivided apartment locations tenants need to concern themselves about a variety of values. There will be a definite amount of floor space that may or may not be advantageously planned for living. By surveying floor plans of available houses or apartments in a renting office one can save travel time to those awkwardly planned or definitely too small for the needs of the family. The plans in Chapter 4 indicate the more extensive use that might be made of them. From plans one can get general notions as to the kind of adjustments it would be necessary to make. That is, plans show how many people could live comfortably or luxuriously in a house or apartment, about how much furniture could be used, what kind of work would be necessary, or what kind could go on.

Not only is the division of floor area shown in a floor plan but also the general shape of the apartment and its location with reference to exposures. Floor plans will also show stairs, fire escapes, porches, elevators, common entrances, and corridors. Floor plans do not show kind, finish, and condition of floors, woodwork, and walls, general standard of use and upkeep of either a building or community. Some questions that one may need to ask will concern the height and kind of adjacent buildings, and the amount of sunlight and view available; the height of the ceilings within the apartment; the plumbing; the lighting; the insulation of walls; the condition of foundation, roof, and exterior walls; the standard of building management and upkeep; as well as the extent of janitorial services.

Whether planning to build a house or choose an apartment one should have clearly in mind the needs and the financial capacity of the individual family. Rooms are needed in relation to the number of members; the habits or family patterns of living; and the types of work to be done within the

house. If washing is done at home, laundry space will be important; if the family is large or many persons are entertained at dinner, a large dining-room will be needed. However, if the family is small, commercial laundry service in the community is satisfactory, and if time is needed for work other than laundering, an apartment laundry may not be used. So,

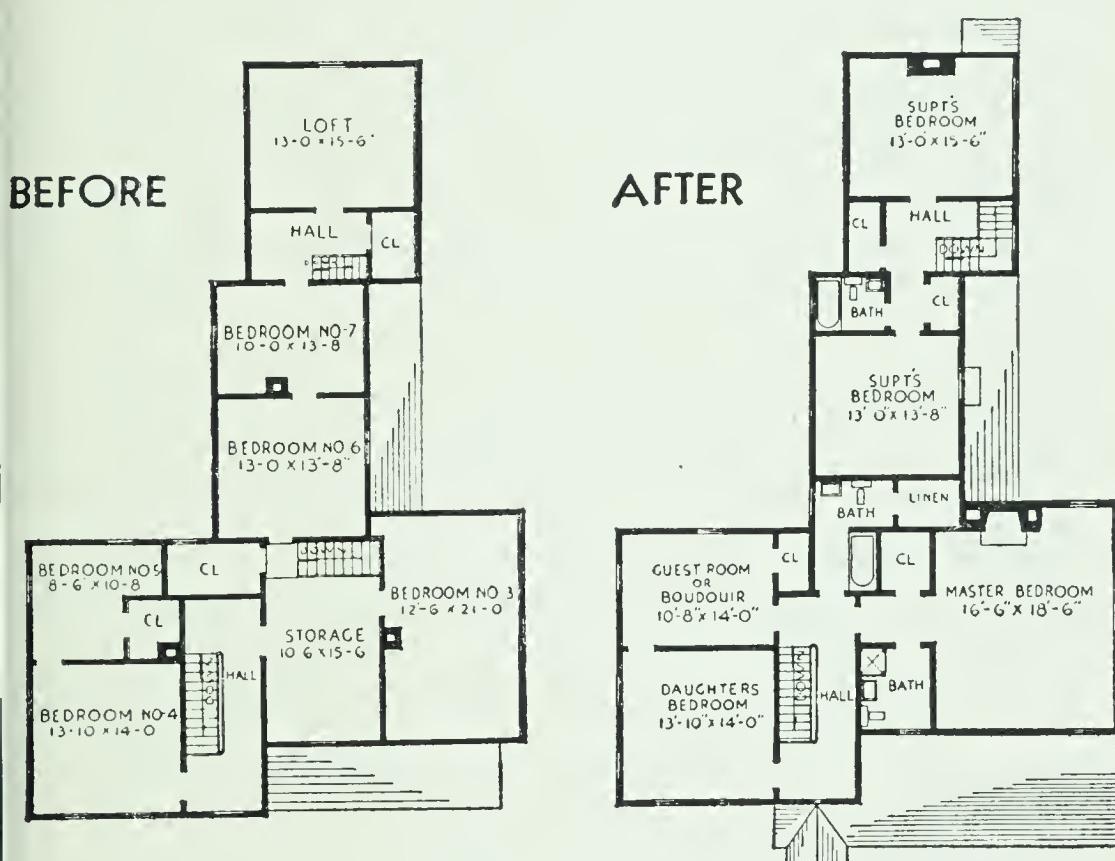


Fig. 5. Functional value of space.

good illustration of greater usefulness in the same space after remodeling. In the "Before" arrangement of rooms it was necessary to travel through one room to get to another. In the "After" plan three baths have been added, closets provided, and all rooms made to open onto halls.

So, if little entertaining is done and there are near-by clubs, hotels, or restaurants suitable to the demands, home dining-rooms may be small or omitted.

**Articulation of rooms.** Floor plans are most serviceable in showing the articulation of rooms. Rooms for group use such as living-rooms should connect with halls or thoroughfares. Living-rooms may connect directly with dining-rooms. Kitchens and dining-rooms should never be separated by any-

thing other than a butler's pantry or similar service space. Occasionally rooms are so awkwardly planned that one is forced to cross halls in going from a kitchen to a dining-room. Except for bathrooms, dressing rooms, closets, or sleeping porches bedroom doors should connect with halls only. To plan bed rooms with their only door into living- and dining-rooms is most inconvenient. Halls are the main arteries of floor plans but care must be exercised lest valuable space is wasted in long or unnecessarily wide halls. For some houses and apartments where space permits, a large, formal room or hall at the front may serve a useful purpose in providing a place where callers may wait until members of the family can be called to receive them. Such halls are both an entry and a thoroughfare to other rooms.

Floor plans are written in symbols of architecture that laymen may learn to read to advantage not only in determining the size and relationship of rooms but also in understanding whether a bad arrangement of rooms can be altered and if so how. Whether or not an alteration is feasible depends upon such considerations as how elaborate it must be, how many partitions must be removed and whether or not these are main supporting walls of the building, how long it will take, who will benefit from it, how much it will cost, and the family attitude toward housing as an aid to living.

Refer to Figure 8, page 153, for two small house plans of compact room arrangement. The first is a refinement of an historic type of two-room house where an open space—now the living-room—was originally roofed over, but open at both front and back. Benches, stools, and the like, on the ground provided for the simple work equipment historically used.

These small but thoroughly modern houses are heated as well as lighted with electricity and equipped with plumbing. The long porch is easily accessible on hot days by means of doors from living-room, kitchen, and bedroom. Winter temperatures are rarely far below freezing. Observe that the dining table is at the front end of the kitchen. *W* marks space in the kitchen for a washing machine.

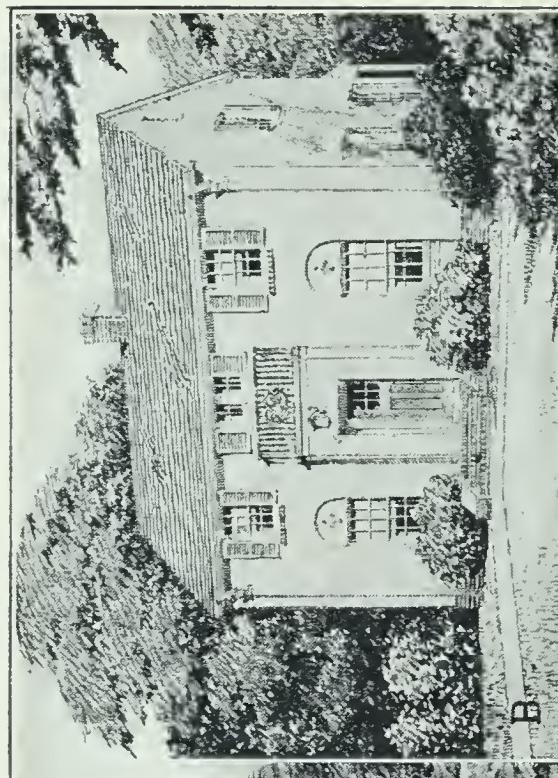
In the larger house there are two bedrooms and a bath easily accessible from all rooms. Again one end of the kitchen is used for eating. A laundry, reached by means of the back porch, takes this work activity out of the kitchen.

Look again at other floor plans of the text as well as in magazines to see the kind of living presupposed for them.

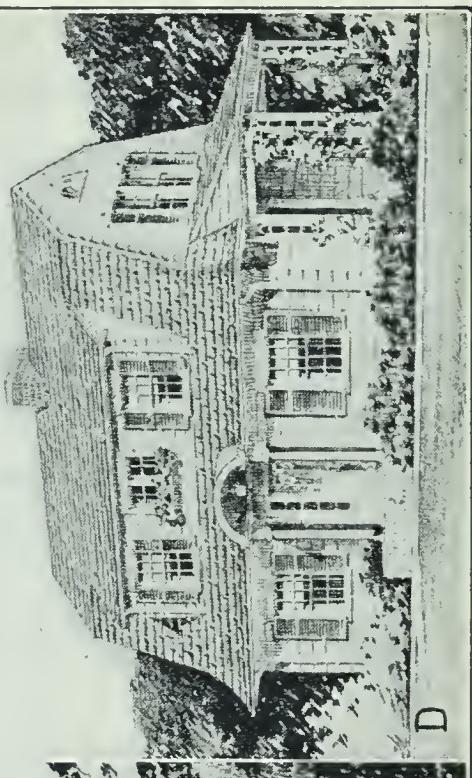
**Floor plans in relation to exterior.** The exterior and interior are intimately related with respect to certain elements. The ground area covered by a house is dependent upon the size and number of rooms on the first floor. The height of rooms and number of floors largely determine the height of the building. This in relation to the ground area may show whether or not the building will be well proportioned from the outside. Chimneys extend from the basement through the roof and when they are on the outside of a wall are often a decorative feature of it. So, too, windows and doors must be planned in relation to need and decorative effect on both the inside and outside of the house. Any alteration of houses requires as much attention to these relationships as plans for a new house. Figure 6 shows different exteriors for the same floor plan. The fixed position of doors, windows, chimney, and the approximate height of ceilings, are evident from the outside elevations.

**Architecture as a housing value.** Architecture includes both the science and art of building. Good architectural planning and supervision of construction result in honest buildings of beauty. Good domestic architecture produces functionally beautiful houses or apartment buildings. To be functional, houses must be planned to serve the needs of those who are to live in them, and to be beautiful, attention must be given to good proportion for the building as a whole, good organization of the masses of which it is made up, good surface effects, good spacing of windows, doors, and decorative features, as well as applied decorations that obviously are included for the purpose of enhancing beauty.

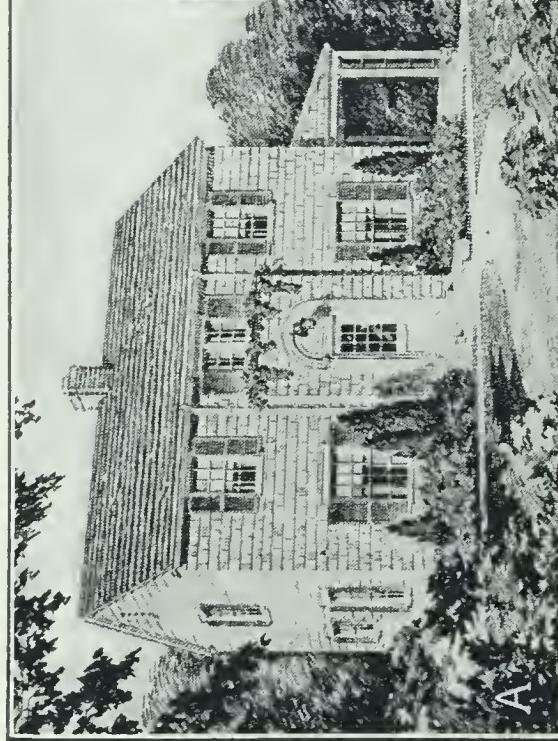
**Functional planning.** Functional planning depends upon cooperation between home-builders and architects. Home-



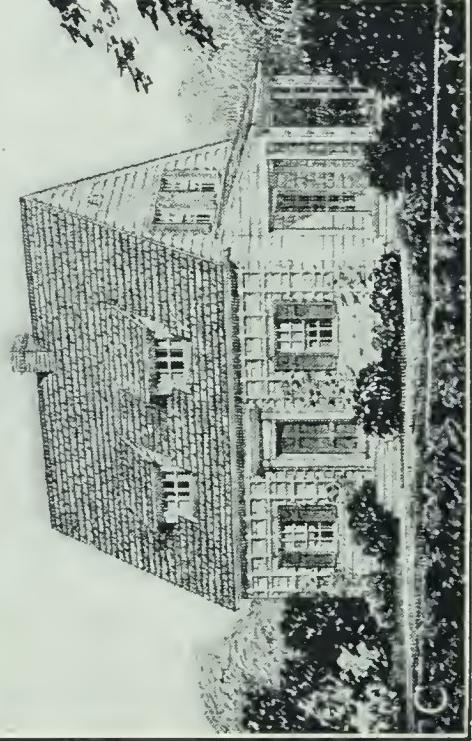
B



D



A



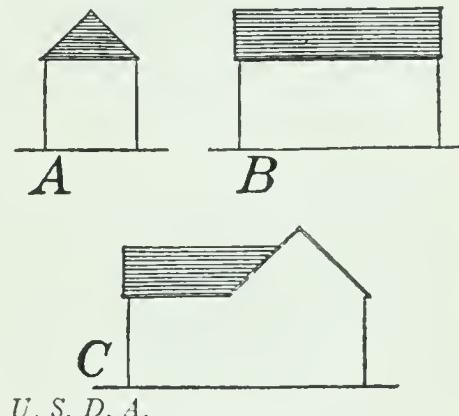
C

*Courtesy of Architects Small House Service Bureau.*

builders need to study their own habits of living to determine which ones are essential enough to be included in the plans. It may be necessary to make choices between a glazed porch or an extra bathroom, or if owners of an apartment building, between wood-burning fireplaces or sound-proof division walls. Again, functional planning may involve decisions as to where the stairway shall be placed in relation to both the kitchen and living-room, or the shape of the kitchen and the placement of those permanent furnishings such as cupboards, sink, stove, and refrigerator. To have functional buildings families must study their needs in relation to the possibilities of building.

**Honest architecture.** Honest building comes from the use of substantial materials and good workmanship. The honest builder uses the materials he agrees to use both for conspicuous and inconspicuous parts of the house. The proportion of cement and sand is up to standard for strength so that crumbling and leaking of walls do not occur; there is no skimping on mortar in the laying of brick or tile walls; well-seasoned woods are employed so there is a minimum of warping of doors, window frames, or other parts. The entire structure is sound when it is honestly built. Since laymen cannot hope to be expert judges of all parts of a building, the integrity of architects and builders is of the utmost value.

**Elements of beauty. Proportion.** Building is three-dimensional, having width, depth, and height. Thus one of the first problems in getting beautiful results in buildings is to obtain pleasing relationships between the base and height of buildings. Each side is a problem. A figure is square, which is a monotonous shape, whereas B is rectangular, thus improving not only the interest of relation-



U. S. D. A.

Fig. 7.

A square outline (A) lacks variety; an oblong outline (B) has greater length than height; an irregular outline (C) gives greater interest to the silhouette.

ship in height to width but also giving a feeling of attachment and closer relationship to the ground. Observe that the house of Figure 8 is too tall for its base or floor area. It is badly proportioned, giving the uncomfortable feeling that a strong wind might blow it over. Bungalows often seem squat when they are poorly proportioned.

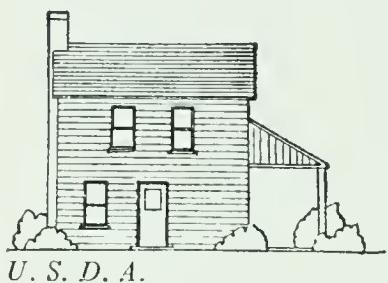


Fig. 8. An example of poor balance.

long, narrow, high building the relation of the height to the long side may be good, while to that of the narrow side it is poor. Consideration of all sides of a free standing building



Fig. 9. A porch should harmonize with the rest of the house.

A. Porch with roof lines lacking in harmony. B. Porch with harmonious roof lines.

side or front elevation if well planned in relation to the side

The house (Fig. 9) shows how a porch roof when poorly planned can detract from the general appearance of a house

*Shapes.* Squares and rectangles are familiar shapes for the sides or façade of buildings.

Each of the four sides or elevation presents the problem of proportion. In a

such as a house, is very important to its beauty. Apartments are often placed so close together that only one side shows. By setting an apartment on shallow lots with a long side parallel to the street and only the narrow ends attached to other buildings there is more exposure for light and usually better proportion for the front façade.

Roofs add triangles, and thus increase interest. A simple roof consists of two rectangles pitched to meet at the top, forming a triangle. A gambrel roof has a break and extra angle on each side. The pitch and shape of roofs add interest to either a

To change the porch roof lines so that they harmonize with those of the house improves the entire structure.

*Mass organization.* A of Figure 7 is a cube. B is rectangular in shape and obviously represents depth as well as width and height. All building design is a development of mass shapes and organization. Pleasing relationships of one part to another make for beauty in the building as a whole. An L-shaped house has two large masses, one of which may be smaller and well related to the main mass. A house on three sides of a court or patio has three large masses, each of which may be the same size as the other two, or a more interesting arrangement can be worked out when the wings are subordinated to the center mass. Attached garages, porches, and bay windows add masses that need to be thought out in relation to the house if they are to be decorative.

*Spacing and balance.* Doors, windows, chimneys, porches, and columns are common building parts that may be used decoratively. The extent to which they will contribute to the effect of the whole building will depend upon their size in relation to it; the way they are spaced on any side of the building; and their beauty. Windows and doors are primarily for use but may be planned and spaced for decoration also. Figure 11 shows symmetrical balance of windows and a door. A per-

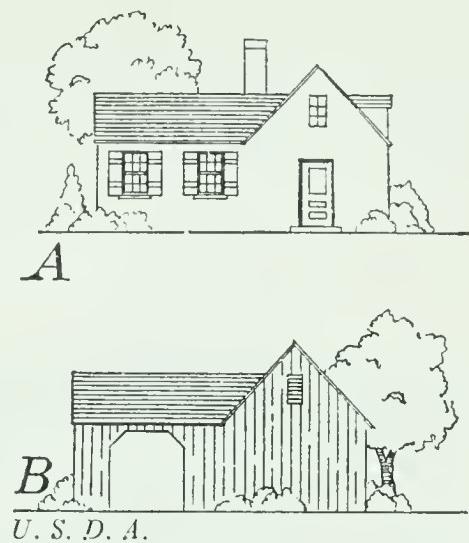


Fig. 10.

Windows, doors and chimneys add interest because they indicate use in either a house (A) or a barn (B).

three large masses, each of which may be the same size as the other two, or a more interesting arrangement can be worked out when the wings are subordinated to the center mass. Attached garages, porches, and bay windows add masses that need to be thought out in relation to the house if they are to be decorative.

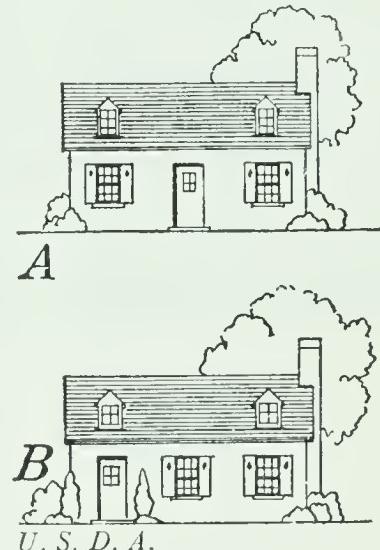


Fig. 11.

Balance can be achieved with either symmetrical (A) or asymmetrical (B) arrangement of doors and windows.

chance to change the porch roof lines so that they harmonize with those of the house improves the entire structure.

pendicular line could be run from the base of the front door of A through to the roof dividing it into equal parts. There would be as many windows of the same size on one side as the other. The house B shows asymmetrical balance.

Windows out of line on exterior elevations are usually annoying and detract from good appearance. See Figure 8. The



*Courtesy of Henry C. Collins, Architect, and Berton Crandall, Photographer.*

Fig. 12. The clearness of glass and the generous spacing of the plate windows make the garden a complement to the dining-room.

height of absurdity is occasionally reached when a non-functional chimney is placed on a wall for decoration and a needed window set in the center of it.

**Beauty in building parts.** Windows, doors, and chimneys may be beautiful in themselves. Figure 12 shows a large plate glass window that is beautiful because of its clearness. The spacing provided by the French doors at the side adds both function and beauty to the framing of this large glass. These doors are

a means of getting to and from the garden and are panels for the large window. When windows are made up of small panes, these are set with muntins. The size of panes and their spacing offer infinite possibilities for decorative effects. In designing you must always bear in mind, however, that windows are for the purpose of admitting light and providing view so that the size of panes and their spacing should be such as to further these uses if windows are to be functionally beautiful.

For centuries doors have been a decorative feature of buildings. Panels, knobs, hinges, carving, fan lights, canopies, engaged and free-standing columns are some of the decorations employed. Figure 13 indicates door possibilities. Chimneys are also essential parts of houses except for those that are electrically heated or supplied with steam from municipal heating plants. Columns as supports for the house or a porch, roof, cornices, copings, lintels, balustrades, parapets, balusters, and quoins are familiar parts of a building that may be decorative both in the way they are designed and used.

*Surfaces.* Surfaces add or detract from the beauty of buildings according to the materials from which they are made and the craftsmanship of the stone mason, brick-layer, or carpenter. Figures 1, 2, and 3, pages 133, 137, and 139, are examples of

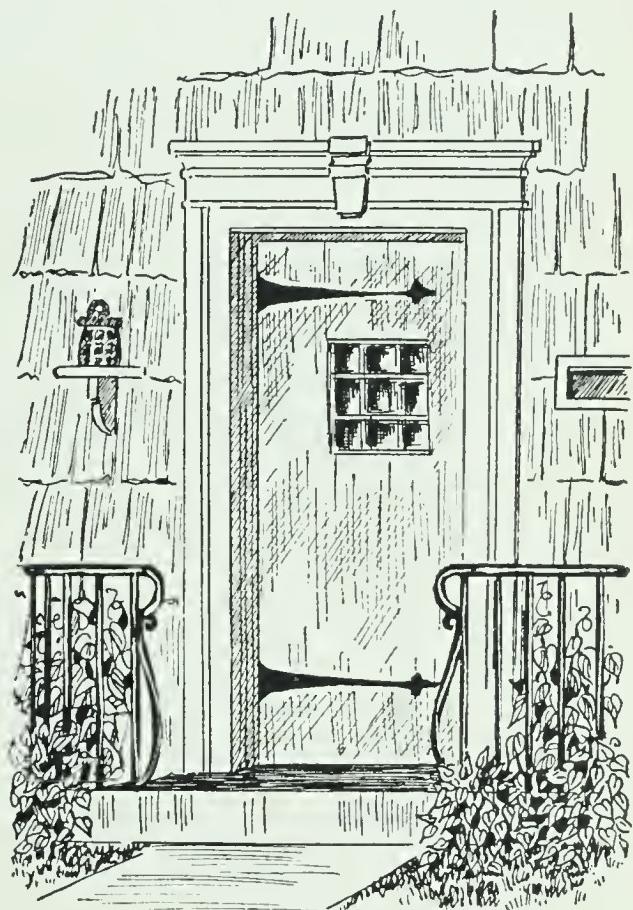


Fig. 13.

This simple door illustrates the infinite possibilities of good planning. Observe the wall texture produced by the use of shingles, the well-proportioned door frame decorated with a few simple lines, the long hinges and small paned window. As a whole it has an air of dignified friendliness.

the artistic use of native building materials. Thumb through the several illustrations of houses to see the difference in effect produced by different building materials. Those supplied locally are likely to be less costly; hence the problem often is to study effective ways of using local materials. Stained-shingle houses on high stone foundations for the sea side, log cabins for woodland, adobe and cement structures for the desert are illustrations of pleasing surface possibilities through adaptation of local materials.

Stone, brick, plaster, stained shingles, and painted clapboards all provide color in wall surfaces. Cement is neutral gray and likely to be dull unless softened by the use of trees, vines, shrubbery, or flowers. Ordinary red brick must be artistically handled by architects if it is not harsh or monotonous. Building bricks are made, however, in soft creams, greens, and buffs of real beauty. Plaster, like paint, has wide color range.

In using color in wall surfaces one should take into consideration the landscape, adjoining buildings, and general weather and atmospheric conditions. The loveliest of wall surfaces in a heavy, smoky atmosphere soon takes on the dullness of soot. The colors of poor plaster work and paint fade rapidly; hence one should investigate the wearing qualities of building materials at the time of selecting. Reliable paint manufacturers test their colors and can tell honestly about how long the colors should wear under given climatic conditions.

**Historic and national influences.** The United States is covered with houses showing the influence of customs and styles of building brought from different European and Oriental countries, for the population of the United States is cosmopolitan. Magazines constantly furnish illustrations of a so-called French, Spanish, Italian, Chinese, or other national style. Even Colonial houses are not essentially American for they too were built by settlers who brought their knowledge of building and their tastes with them. Truly American building would be an outgrowth of the tepee or cliff-dwellers' house.

These national influences have given elements of beauty to houses but often have been responsible for very awkward and wasteful floor plans. To have livable houses, the plans need to be adapted to modern conditions of living. Among the modifications of original style, the Spanish patio furnishes an excellent illustration.

The Spanish patio was an outdoor work area where wash tub, outdoor fireplace for cooking, and open bucket well, were essential. These activities have been changed with modern invention. Washing machines and set tubs, sinks, gas or electric stoves and refrigerators, stationary electric mixers, and the like transfer these work activities to the sheltered laundry and kitchen leaving the open inclosure for rest or recreation use only. Figure 8, page 153, also shows a modern refinement of a historic plan of building.

Where persons inherit or come to live in a house of a definite style, furnishings in keeping with it are needed for the best results in appearance. When the furnishings of these historic buildings are comfortable and adaptable to present-day use, reproducing them lends charm as well as comfort. Too often, however, historic styles are reproduced without regard to where they will be used and many incongruities result. One may find an antique bed-warmer beside a gaslog fireplace in a radiator-heated house; a mosquito-breeding imitation of a once functional well in the patio; or a dust-collecting what-not in the soot-shadowed city apartment.

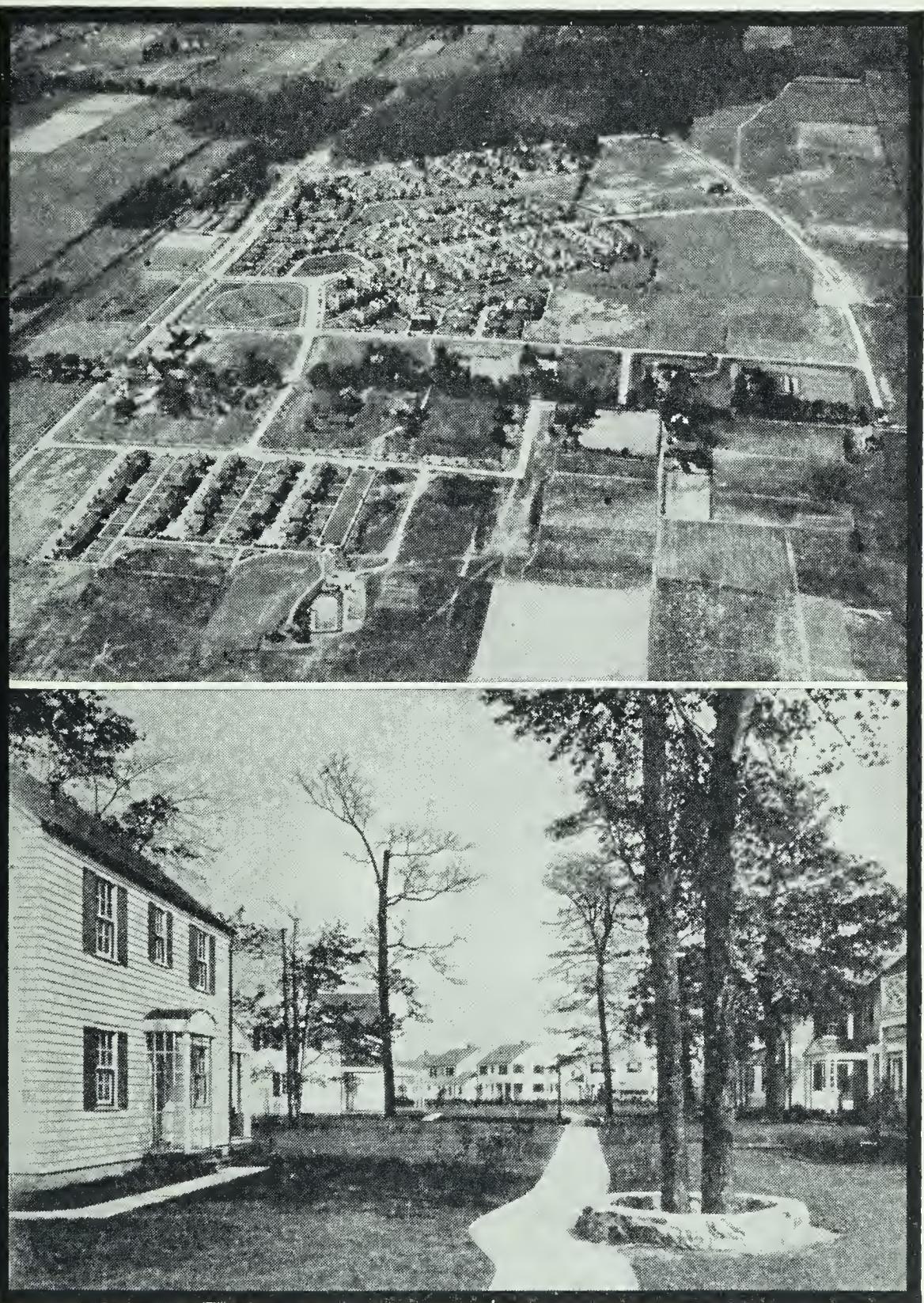
**Adaptation to the local geographic conditions.** Functional housing provides not only for the kind of activities that owners or tenants desire, but is adapted to its geographic location. To be healthful and comfortable, cold-climate houses should do two things so different that little progress has ever been made in solving the problem for the mass of people. Cold-climate houses should admit a maximum of light in winter and still be warm. The methods of building that make for warmth reduce the amount of light. Large windows with few outside obstructions, such as high buildings, and to which storm windows can be added in winter, are the most common means of getting

more light and at the same time protecting against extreme cold.

The problem of warm-climate houses is to get ventilation, avoid dampness and insects, have sanitary and pleasant outdoor living areas, but provide for heating the house on those chilly days when the thermometer reading is well above freezing but low enough to make sitting indoors or out thoroughly uncomfortable and even dangerous to health. To be functional, the doors, windows, and other openings of houses in desert locations where dust storms occur, should fit so well that when closed the house is hermetically sealed. Fans or air-conditioning systems are then needed. Boulder Dam and Las Vegas are examples of small towns in desert country with a high percentage of home air-conditioning.

The northeastern portion of the United States shows an early adaptation to land and climatic conditions. Farming was a common occupation. Winters were severe with heavy snow piling into drifts too deep to wade through; hence horses, cows, and other farm animals needed shelter. Wood and foods needed storing. As time went on sheds came to be attached to the rear of the house and extended to the barn. During periods of heavy snow it was then possible to go from the house to the barn under cover of sheds.

**Adaptation to community.** When houses are built close together on streets, it is important for the appearance of the community that they should be similar enough in style of architecture to be a part of the street. An extremely elaborate house on a street of quiet cottages at once stands out as apart from the cottages and may actually detract from the good appearance of the street as a whole. With the freedom that exists for individual owners to choose styles of building it is important that those who wish the strikingly different types choose to build on larger lots where a sufficient number of trees and a large lawn may be used to give setting for the house and to isolate it from those to which it bears little relationship. Some of the highly functional houses of modern design have elements of beauty in themselves when given



*Courtesy of the City Housing Corporation.*

**Fig. 14. An early housing project.**

An airplane view of Radburn, N. J., showing thoroughfares and the grouping of houses. All houses are of one general type and face walks. Automobile entrances are to the rear.

good settings but lose by contrast when placed too near to others very different.

Housing projects have become more common within recent years, and give little freedom of choice to individuals as regards style, but often produce a much better general appearance in the community. Radburn, New Jersey, is a notable example of such planning. Here all the houses, the general community building, and the school adhere closely to one general



*Courtesy of the U.S. Department of Agriculture, Forest Service.*

Fig. 15. A house of wood in modern design adapted to flat land.  
Exhibited at A Century of Progress, Chicago, 1934.

style. Though detached, each house is obviously part of the community.

The illustration (Fig. 9, page 404) is part of a more closely planned unit, for this is an apartment but not of the many storied variety common to large cities. It more nearly resembles a group of attached houses. Many of the modern apartment projects while obviously a single building are so spread around courts, play yards, and gardens as to give the appearance of being a unified group of single dwellings. Where ground



*Courtesy of U. S. Department of Agriculture.*

**Fig. 16. Street planning.**

Above, trees and grass separate street traffic from the homes. Telephone poles should be put through alleys or underground. Below, a type of street planning and row house building that make for wretched living conditions.

space is limited, community planning rather than individual choice makes for better appearance.

#### QUESTIONS AND SUGGESTIONS FOR STUDY

1. If you live in a city get a map and block in roughly with green crayon the least congested areas. With a red crayon trace in the best form of public transportation as judged by the considerations given in the chapter. With yellow trace in main highways for automobile transportation. Study your map to see how well uncongested areas are served.
2. With black shade in the most densely populated areas.  
(a) Now study your map as a whole to see where there are dilapidated buildings used for housing; (b) where there are new or well cared for buildings. Are there any mixed areas?
3. Are there areas restricted for residential use only?
4. What city ordinances have you regarding the building or use of residential property?
5. Has your town been influenced by definite architectural styles such as Georgian, English half-timber, the Dutch Colonial, the Spanish, or others? What evidences do you find?
6. Is the town built on level, rolling, or hilly ground? What influence has topography had on the way people built houses?
7. How many grade schools have you? Where are they in reference to residential property?
8. How many and what kind of parks are there? How are they located in relation to dwellings?
9. Secure a floor plan for an apartment building and study it to see (a) how many apartments are on each floor; (b) how many apartments are served by one entrance; (c) whether it has elevator service and, if so, whether there is both passenger and freight; (d) how many persons are expected to occupy one apartment; (e) what kind of living and work activities are presupposed by the floor plan.
10. Using the same floor plan, (a) see how many exposures each apartment has and then, if possible, check to see what buildings are on the exposed side and how high they are; (b) inspect the building to see how entrances and halls are kept; (c) find out what kind of heat is provided and under what conditions it is given.

11. Check through the chapter listing points to be kept in mind if you were looking for a home for your family. Add to this list from your own experience.

#### REFERENCES

- CLARK, Arthur B., *Art Principles in House Furniture and Village Building* (Stanford University, Stanford University Press, 1921).
- ROBINSON, Ethel and Thomas, *Houses in America* (New York, Viking Press, 1936).
- SHULTZ, Hazel, *Making Homes* (New York, D. Appleton-Century Co., 1931), Ch. III, IV, V.

# 10

## THE COST OF HOUSING

AS A USER or consumer of housing there is cost of some type attached. This cost may be in the form of rent or the sum total of the items attached to the purchase and maintenance of property. Sometimes service is rendered to cover part or all of the cost of housing. Whether money or services are used to pay for the right to occupy property, consumers get housing values. They have space and the privilege of using it as specified in a lease or other agreement. Unlike food that one consumes by eating it, or clothing that one uses until it is destroyed, housing lasts over a long time so that different persons use it. They pay for different kinds of privileges of use.

The purchase or rent of housing is not a simple transaction like buying a loaf of bread or a garment. It would be absurd to think of consumers reselling bread and most garments. However, the resale value of housing is commonly discussed. Occasionally houses sell for more after use than before, but it is safer planning for families to consider that there will be constant depreciation of price in housing as there is in an automobile. The ownership of property is a business that calls for special understanding of buildings and their management. Some individual families have time, knowledge, and money to manage and finance an individual home. Others have neither enough capital, understanding of buildings, nor time to profit from individual ownership. For them attempting to own may mean loss of their savings.

It is not the purpose of this chapter to teach you that you

should or should not own your own home, but rather to help you begin thinking about what must be considered in computing the cost of rent or ownership and what privileges and services as well as responsibilities go with each.

1. What is rent?
2. What items must the family plan to cover with the money used for housing when one is buying a home?
3. What items does your family or institutional group pay for under the heading of housing?
4. If you could get the same accommodations for \$10 per month in a room ten miles from work where the trolley fare was 10 cents per ride, what money advantage would there be over one at \$15 per month within walking distance?
5. How does a small amount of money to spend for rent limit one's choice in housing?
6. What does a tenant get for rent?
7. What is a lease? Are the conditions set forth in a lease standard for all towns or cities over the United States?
8. What is the purpose of a deed?
9. What is a mortgage? How commonly are mortgages used?
10. Under what conditions is it unwise for a family to try to own its own home?

**Items of cost.** Both individuals and families are consumers of housing as well as other commodities such as food and clothing. In fact, housing is a major item of consumption to which cost is attached. When a house is rented, this cost is expressed in a single sum which is the price of the rent. When a home is owned, the cost of using it must be figured by adding the taxes, insurance, interest on the money invested or the loans carried, special assessments, upkeep and repair. Coal, electricity, telephone, gas, water tax, and the like, belong also to the cost of housing though they are not considered as items of financing the house when it is sold. The sum total, however, of all these costs divided by twelve will give the cost per month of living in one's own home. This figure is comparable to rent.

The values one receives for one's rent or ownership expense vary widely as you will see.

**Cost versus value.** If one had limitless funds, the problem of buying shelter would be that of listing the values one wishes and then proceeding to hunt among houses already built or plans for building until the right one was located. But most people must estimate the amount to be spent for shelter and then search until they find the largest number of values they would like to have for the amount they can spend.

**Income.** Obviously the first step is to get as accurate an estimate as possible of the income that can be anticipated. This will call for making an inventory of all sources of dependable income. If the income is from wages only, the problem is comparatively simple. One knows how many dollars per week or month may be counted on when the employment is permanent. If there is more than one earner in the family contributing to the cost of shelter, it may be a simple problem of addition to find the total amount available for the family's housing. If part of the income is to be earned by subletting rooms in a large house the problem is complicated by the necessity of estimating the probable time they may be vacant before being rented and the cost of advertising them, keeping them furnished, heated, and cleaned. Rent, as earned from subletting cannot be counted as clear profit.

**Money income.** The sum total of wages, rents, and other earnings as well as money gifts represent the money income. Many family incomes are from stores, industries, farms, other businesses and professions where the amount for the year cannot be anticipated with certainty. One year it may be high, another low. Income from other investments like income from a private business are subject to fluctuation also.

**Real income or saving of money out-go.** Raising food in garden, building rather than buying furniture, making draperies, quilts, rugs, and so forth, increases the income to the extent that less money is required to buy these items. The family that papers its own walls spends money for paper and paste only. Their labor is paid for in terms of what they have

saved by not employing some one else to do the work. Firing the furnace, mowing the lawn, repairing the plumbing, and so on, are other ways of reducing expenditures for housing. If the time could be used more profitably elsewhere there is obviously no advantage in this work. If, however, it is done from time that would otherwise be used for recreation it may or may not be profitable according to whether one gets relaxation from the work so performed. Many office workers find it a rest to mow a lawn or keep up a garden since this is totally unlike their regular work. The same person may not know how nor have an interest in learning to take care of the plumbing or fire a furnace. It may be burdensome and a worry. Obviously many inaccuracies easily occur in comparing costs in one place and another, and also in computing the cost of shelter for any one family.

#### INVENTORY OF SOURCES OF INCOME

##### *Money*

Wages

Earnings of businesses or professions

Rents on property not occupied as residence

Interest on mortgages, bonds

Dividends on stocks

Sale of produce of farm or garden

Sale of commodities other than food

Gifts

##### *Real Income*

Commodities raised or made for use in home

Unpaid labor for regular care of house, such as care of furnace, halls, washing windows, care of grounds, and house-keeping in general

Unpaid family labor for repairs and remodeling.

How much can one spend for housing? This is always an individual question, and no fixed amount of money or formula for dividing the income can be given. Help toward figuring individual problems is, however, available. The amount actually paid from family earnings for housing may be noth-

ing in the case of those who receive their housing from relief or the gift of individuals, or it may be concealed as part of a wage when a man and his family work on a farm or an estate and are provided with housing, and also in the case of the household employee who receives a room or suite as part of the wage. In the case of the farm the renter pays, let us say, five dollars an acre for an improved farm, hence it is impossible to assign a definite charge for the use or rent of the house. Again the sum for rent of living-rooms may not be separated as an item in the total rent of a store. A store with rooms at the rear that rents for a flat sum may not show an amount charged because of the use of these rooms for housing.

**Tangible rent.** The cost of housing is most easily tangible when it is expressed in rent. A fixed amount is payable by the week, month, or year. Monthly rent is the most common. According to a survey made by the United States Department of Commerce in sixty-one cities, it was determined that among these samples the average expenditure for rent was about 25 per cent of the family income, the families with low incomes being compelled to spend a greater proportion of their income for rent and those of large incomes less than 25 per cent. That is, the family with a total income of \$50 per month in a city may find that it is obliged to spend more than \$12.50 per month or above 25 per cent of the income to get any place at all. The family with \$400 per month may find entirely adequate housing at \$75 or \$80, thus taking but 18 to 20 per cent of its income.

The \$50 family may have more members than the \$400 so that as consumers their needs for space are greater; yet with their increased requirement for food which is an item of first importance there may actually be less than 25 per cent of the income available for rent if adequate food for nutrition is to be figured first. Meager incomes leave no allowance for clothes, medical care, or recreation. Obviously there is no margin or leeway for error in choosing food or in making improvements in poor dwellings. Among the families of lowest income not even ten cents can be taken for soap or paint.

**Relation of choice to amount of rent available.** The smaller the amounts available for rent or the ownership of housing the less choice can be expected. The family with no allowance for housing is forced to take anything that is to be had. It may be a roofed-over place between two buildings such as gipsies have been known to use in their migrations. It may be a box car; a dark, damp, unequipped basement; or the top floor of an eight-story walk-up tenement with no running water beyond the second floor.

Though in a general way increased income means more freedom of choice, there are towns or areas of cities where such serious housing shortages exist that even with what might appear to be a fair average income it is impossible to find either sufficient space or meager comforts in the places available. Where such conditions obtain, private philanthropies and government aid have been used both in Europe and the United States to erect new and demolish condemned buildings. Contrary to the belief of some persons, these new buildings do not house the lowest income group, but rather those families who are able to pay rent within the lower rent brackets. That is, the rent may range roughly from around four dollars to ten dollars per month per room in the United States. This is well above the financial ability of the lowest income groups.

What housing projects do for the lowest income groups is to make available the places vacated by the group who can pay the smaller rents. If the low income groups vacate reasonably decent buildings, the lowest income group may inherit reasonably decent cast-offs. When, however, reasonably decent buildings are wrecked in an area to make room for new buildings, and the worst buildings are left standing, the lowest income groups are still housed in entirely inadequate slum buildings.

**What is rent?** Rent is a fixed charge made for the use of land, buildings, or equipment and is payable regularly by day, week, month, quarter, or year as agreed between the owner and tenant. Hotel rooms for transients are rented by the day, summer cottages by the season, farms usually by the year. Apartments and houses are commonly rented by the month,

This Indenture, made this second day of January  
Hundred and thirty eight between John Doe

A. D. One Thousand Nine  
hereinafter called Lessor.

and William Smith

hereinafter called Lessee

**Witnesseth**, that Lessor, for and in consideration of the covenants and agreements hereinbefore contained and made on the part of Lessee, does hereby demise and lease to Lessee for use only by Lessee, and for a private residence or dwelling only, the premises known and described as follows: Apartment No. One                   on the     First              floor of the building

located at One State Street  
Chicago, County of Cook, and State of Illinois.

together with the appurtenances thereunto belonging, in the City of

To Have and To Hold The Same for and during the term commencing on the Second day of January A. D. One Thousand Nine Hundred and Thirty Eight (1938), and expiring on the First (1st) day of January A. D. One Thousand Nine Hundred and Thirty Nine (1939), inclusive, and from year to year thereafter, unless and until this lease shall be terminated at the date last above mentioned, or at a like date in any subsequent year thereafter, by the giving by either party to the other of not less than sixty (60) days' notice in writing of such termination, which said notice shall be delivered in person or sent by registered mail, when to Lessor, at the place stipulated herein for the payment of rent, and when to Lessee, at the address of the demised premises.

In consideration of said demise, and of the covenants and agreements hereinafter expressed, it is covenanted and agreed as follows:

**First:**—Lessee shall pay to Lessor, at the office of **Richard Roe, Real Estate Agent**,  
the rent per month of **Fifty** dollars in advance,  
for the term created by this lease. Said rent shall be due and payable on the first day of each and every month of said term, it  
being agreed by the parties hereto that the time of each and all of such payments is of the essence of this agreement.

for the then unexpired portion of the term hereby created, as liquidated damages.

Third.—Lessee shall not permit any unlawful or immoral practice, with or without his knowledge or consent, to be committed or carried on therein by himself or any other person or persons, or for any purpose, nor to use or occupy the same for any immoral, indecent, disorderly, or riotous purpose, nor for any meeting or school purposes, nor to give instructions in music or singing, nor for any other use than that of private residence or dwelling; nor allow said premises to be used for any purpose that will increase the rate of insurance thereon, nor keep or use or permit to be kept or used in or on said premises, or in or on any place contiguous thereto, any dangerous fluids or explosive materials.

Fourth.—Lessee is directed to furnish the same to my removal and those whom I send, and Lessee agrees to pay all expenses of removal and delivery.

**ARTICLE VIII.—THE SAME AS MAY REMOVE AND MOVE THE HOUSE AND Lessee agrees to pay  
the expense of removal and moving.**

**ARTICLE IX.—WHERE THE BUILDING IS EQUIPPED FOR THE PURPOSE, Lessor shall furnish, only in  
the tubs, basins, pipes and faucets provided for such purpose, hot water during the term of this  
Contract, and shall not be liable for any damage or loss sustained by Lessee in the use of such  
hot water, if the weather and temperature require it, from the 1st day of October until the 1st day of April  
of the succeeding year for the use of Lessee, except when prevented by strike, accident, or other  
cause, from doing so. Lessor shall be liable for the damage sustained by Lessee in the use of such  
provided in said building for the furnishing of cold water, during the remaining part of the  
year, for any injury or damage whatsoever which may arise or accrue from his failure to furnish cold  
water, except when caused by Lessee's own fault; and in case of such failure, all claims for such injury or damage  
being hereby expressly waived by Lessee.**

~~boiling~~ hereby expressly waived by Lessor.

Truth.—In case said premises shall be rendered uninhabitable by fire, explosion or other casualty, Lessor may at his option terminate this lease or repair said premises within thirty days. If Lessor does not repair said premises within said time, or if the building containing said premises shall have been wholly destroyed, the term hereby created shall cease and determine.

**Twelfth.**—If Lessor shall vacate or abandon said premises or permit the same to remain vacant or unoccupied for a period of six (6) months, or if payment of the rent reserved hereunder or any other sum due from Lessee to Lessor, or any amount due from Lessor to Lessee, in the possession of the lessor, shall terminate with or without the consent of the lessor, the lessor shall terminate with or without any notice or demand whatsoever, and the more rapidly or promptly thereafter, by Lessee shall constitute a forcible entry and detainer action, and shall commence such action within ten (10) days after the date of termination, without notice of such election or any notice or demand whatsoever, this lease shall thereupon terminate, and upon the termination of Lessor's right of possession, as aforesaid whether this lease be terminated or not, Lessee agrees to surrender possession of the demised premises immediately upon the filing of the complaint, and to pay to Lessor all costs in and/or demand for possession of the demised

**Eighteenth.**—All covenants, promises, representations and agreements herein contained shall be binding upon, apply and inure to the benefit of the heirs, executors, administrators or assigns respectively of Lessor and Lessee.

not to be taken to exclude or waive his right to the use of another.  
Present in the singular number, or otherwise, to apply to the person, one or more male or female, and by the arms or corporation, that person, or persons, to whom may be described as Lessor or Lessors hereinabove, and all pronouns used herein, and referring to this part shall, save as otherwise specifically expressed, relatives either of number or gender thereof. If there be more than one Lessor, the singular number of the word "Lessor" is given jointly and severally and shall authorize the entry of appearance on a waiver of execution, and shall be liable by his or her confession of judgment against any one or more of such Lessors, and shall authorize the entry of judgment of every other act mentioned in said Clause **FIFTEENTH**, to the same of and behalf of, or in respect of, any one or more of such Lessors.

**WITNESS** the hands and seals of the parties hereto the day and year first above written.

#### **IN THE PRESENCE OF**

Richard Boe

John Doe

WALLACE, GENE

Courtesy of G. L. Cole and Co., Chicago.

Fig. 1. Lease form.

with a lease or agreement stipulating the number of months for which the tenant is responsible. The owner is responsible to keep the building available and in condition for the use of the tenant. Requirements of a lease vary somewhat from place to place. Figure 1 shows a portion of a standard type Chicago lease. Whether or not taxes, interest rates, wages, or other items of building costs move up or down, the tenant is legally responsible only for the same rate until the expiration of his

lease. Then the rent may be raised if the owner feels he can get more.

What does the tenant get for rent? What the individual tenant gets varies widely, but in general he receives the use of space, services, and rights or privileges. The services will include such items as heat, light, water, care, and upkeep of the building. The services of financing the building; paying taxes, insurance, interest; collecting rents; and so on are additional items to be figured. Tenants are granted rights to use buildings in certain ways as defined by the lease. A house or apartment is usually limited to the activities necessary for family living exclusive of earning an income. In some places a portion of the space may be sublet; in others the owner reserves the right to limit the number of persons using the space. Such restrictions are not only a benefit to the owner in protecting the building from excessive wear and bad reputation but also a protection to those tenants who object to overcrowding of halls, stairs, and yards. This establishing and preserving of better standards becomes in the long run a benefit to the group. The services included in the renting of rooms, unfurnished or furnished apartments or houses varies so much that it behooves both tenants and owners to keep in mind the kind that may be rendered and agree at the time of renting.

In states where the land is of comparatively little value for agricultural purposes, the scenery is frequently of such great beauty as to attract tourists. The result has been to make a new source of income because of the rent of rooms. A bulletin describing in detail the standard of service to be rendered for the rent of rooms to tourists, has been issued by the extension division of one state college of agriculture and other states have issued similar mimeographed suggestions. Some of the services rendered are shown in the following quotation.<sup>1</sup>

When any home owner hangs out a tourist sign, *rest* is the chief thing offered for sale. Only a bed equipped with a good

<sup>1</sup> Rena Campbell Bowles, *Tourist Homes in Maine*, Home Industries Specialist, Bulletin 231 (College of Agriculture of the University of Maine, December, 1936).

mattress, firm spring, fresh sheets, and covers adequate for weather conditions will give the complete comfort which is essential for rest. Spotlessly clean bedrooms, furnished with clean, comfortable beds and simple yet attractive pieces of furniture for rest and convenience, arranged according to accepted principles for beauty and comfort, appeal to most travelers.

Necessary pieces of furniture to meet adequate requirements for guests are a small bureau or chest of drawers; a dressing table, which may also serve as a writing desk (a writing center is essential); a mirror large and clear enough actually to see in; two chairs, at least one an easy chair; and two well-lighted centers. A bedside lamp and a floor lamp which can be moved easily meet the need for light centers. An inexpensive suitcase rack, home-made or otherwise, will more than pay for itself in the saving of bedspreads and furniture tops. A guest who is considerate of the dirt and scratches a suitcase may leave on pieces of furniture may find it necessary to unpack in an inconvenient manner if this inexpensive yet essential piece of equipment is not provided.

A place to hang clothes is very necessary. A clothes closet is the most desirable place, of course. A costumer may be provided if there isn't any closet space, and for guests who remain only one night, this answers the purpose. Some tourist home managers provide four to six hangers for each guest and have no trouble about losing them.

**Rent of rooms.** The rent for rooms covers use of space, heat, light, bedding, towels, curtains, and so forth; cleaning of room and making of bed; and service for the door and telephone. The space to be used is usually specified at the time of renting. In addition to the bedroom rented there will be use of a bath, if a private bath is not a part of the room, and usually freedom to sit in a living-room or on porches. Rooms let for long periods of time to the same person may include use of the family laundry, kitchen, living-rooms, or garage as is agreed between the tenant and owner.

The tenant has the responsibility of paying his rent regularly and compensating for any damage done to property. Courtesy demands that tenants maintain at least as good care of property as that given by an owner.

Owners have the responsibility of providing the services agreed upon at the time of renting. Rooms should be kept comfortable to sit in during the day and until a reasonable retiring hour at night. Door service should be given unless the tenants carry keys. The use of the room rented should be regarded as the exclusive right of the tenant for living purposes, the owner respecting the tenant's right to privacy.

**Cost of housing for woman living alone in New York.** It is one thing to know what is desirable or what one would like and another to find out what is available. In an effort to determine what it would cost to get certain housing values in rooms for women living alone a study was made of available places under the New York State Department of Labor. You can see below what was set as a *minimum* standard and what rent it was calculated would be necessary to get these values.<sup>2</sup>

A bed with a spring and mattress, a chair and reading light, a desk, a rug, a closet or wardrobe, a chest of drawers, and a mirror have been considered by the Minimum Wage Division of the Department of Labor as the irreducible minimum required in furnishing the room of an employed woman. The room should be in good repair, afford sufficient privacy, have good light and heat and sufficient bedding and linens, and include laundry privileges. The rent of such a furnished room was calculated at \$238.85 per year when averaged for the State as a whole, and at \$245.96 for New York City.

#### HOUSING FOR WOMAN LIVING ALONE<sup>3</sup>

Rent of furnished room, including charge, if any, for laundering-privileges.

The following standards were used as a guide in collecting rent data for furnished rooms occupied by wage-earning women in each community:

<sup>2</sup> *Labor Information Bulletin*, Vol. 5, No. 2 (Washington, United States Department of Labor, Bureau of Labor Statistics, February, 1938), 7E.

<sup>3</sup> "Adequate Maintenance and Protection of Health for Women Workers in New York State," prepared by Bureau of Research, Division of Women in Industry and Minimum Wage, January, 1938.

The house should not be located in a neighborhood which is generally known to have a bad reputation.

The house should be reasonably accessible to public transportation facilities.

The house and the furnished room should be in a good state of repair. The house should have electric lights.

Existing legal provisions as to construction, fire protection, light and air, sanitation, etc., should be complied with.

The room should be occupied by one person. It should be kept in good condition and should be well heated.

The room should have a window large enough to admit direct light and adequate ventilation. The window should open directly on a street, or on a court or yard not less than eight feet wide. Electric lights should be adequate for reading or sewing at night.

There should be complete bathroom facilities available within the dwelling. In a city which has a sewer system, the toilet and bathroom facilities should be connected with that system. The occupant of the room should not be required to use a toilet to which the general public has access. The bathroom should be accessible to the sleeping room, and no home where more than seven persons use one bathroom is acceptable.

The room should be provided with sufficient bedding, bed linen, and towels.

The room should contain adequate furniture, including the following: bed with spring and mattress, chest of drawers, mirror, chair, table or small writing desk, closet or wardrobe, rug, and reading light.

**Furnished apartments.** Furnished apartments differ from rooms in private homes largely in degree of privacy. In the case of the room both the tenant and owner share the use of the house beyond the bedroom rented. This is done according to the plan worked out between them. In the case of the furnished apartment, only halls, stairs, and entries are shared. The tenant and owner may rarely see each other if the rent is paid by check. There may or may not be desk service for accepting packages, mail, and personal messages. Some build-

ings have servidores in which it is possible for delivery men to deposit packages. Summer cottages and houses are also rented furnished. However, the renting of furnished houses is comparatively rare. In such cases an even higher degree of privacy may be represented if the cottage or house is isolated.

**Rent must cover.** Renting property is a business and is carried on for profit as is selling groceries or clothing. In order that the owner may have repayment for his expenses, compensation for the risk of investing his money in real estate, as well as pay for the services he gives, the rent charged must be great enough to cover taxes and special water, sewer, gas, street, or other city assessments; insurance, interest on the money invested and mortgages carried; heat; general building lights; janitor services; advertising; showing of the building to prospective tenants; collecting rents, bookkeeping, and other office costs as well as repair and upkeep of the building. Since there is no income from vacant apartments, vacancies in rental buildings represent loss. In computing the amount that must be charged on any given apartment an allowance is made for possible vacancies. That is, the renting records may show that 10 per cent of a building is commonly vacant; hence the rent of this 10 per cent must be divided and added proportionately to the price of all apartments in order to prevent loss to the owner. Vacancies represent one of the risks assumed by owners, since the number may greatly exceed the normal expectation. Building depreciation is another cost of ownership.

**Cost and financing of a home.** There obviously is the original purchase price which varies from a few hundred in the cheapest houses to a million and more dollars in the most expensive. This purchase price includes ownership or lease of the lot and ownership of the building. When used, land leases for buildings commonly exceed the normal expectation for life of an individual, thus providing for a reasonable degree of permanency.

To figure the cost of living in a building that one owns it is necessary to reckon the interest on the money invested. That is, if one's home costs \$5,000 and one could keep the money

invested at 5 per cent, it would earn \$250 per year. When invested in a house this \$250 must be figured as part of the cost of occupying one's own home. If it is possible to keep the money invested at only 2 per cent, the figure would change from \$250 to \$100.

But the house may not be entirely paid for at the time of purchase in which case the purchaser will invest what he can spare from earnings to pay part of the purchase price. If this sum is large enough, he receives an equity or legal rights in the building, and the owner may take a mortgage for the remainder of the sale price. This mortgage can be sold to still another person in which case, of course, the original owner no longer has any claim to the building. On the other hand, the purchaser may hire money to supplement the savings that he uses for a down payment by finding a person with money to invest. On this mortgage or loan there will be interest. That is, a purchaser may have but \$2,000 to pay down on a \$5,000 house. Payment of the \$2,000 is guarantee of his sincerity to complete the purchase and gives him an equity or rights in the building but not full ownership. The remainder or \$3,000 will be carried by him as a mortgage made payable at the date stipulated in the mortgage. Having a mortgage is a very common practice as was shown by *A Financial Survey of Housing in 61 Cities of the United States*, listed in the bibliography at the end of the chapter. An average of 58 per cent of the homes surveyed were mortgaged.

On the date when the mortgage falls due the owner is obligated to have saved enough money to meet this payment, or either to renew the mortgage with the original mortgagor or find another investor who will take a mortgage on the property.

Interest rates vary, but for the sake of demonstration we may assume that \$3,000 will be carried as a mortgage at the rate of 5 per cent. This means that the owner must pay \$150 yearly for the use of the \$3,000. Since he has \$2,000 invested there is \$100 interest that might be coming to him if he had invested his money elsewhere at 5 per cent. In other words,

\$250 per year of interest is represented in his \$5,000 investment, or \$20.83 per month.

Unless one borrows from a friend who makes no charge for financing, there is likely to be a small amount for finding the money and making the loan. In case the full sum cannot be obtained from one person it may be necessary to get it as first and second mortgages. Since the first mortgage is paid first in case it is necessary for the mortgage holder to collect by foreclosure and sale of the property, it is common for the rate of interest to be slightly higher on second mortgages. If there should be heavy depreciation of the property, it might not sell for enough to satisfy both the first and second mortgage holders, hence the second mortgage holder would be the loser. To induce persons to take this additional risk, second mortgage rates are commonly higher. Mortgage loans up to 40 per cent of the value of property, are conservative. Beyond 60 per cent experience has indicated that the risks of payment are greatly increased. Figure 2 is the reproduction of a standard first-mortgage form that has been filled in.

A deed is the legal instrument for conveying title and ownership of property. The form here filled in and reproduced is of a standard type; however, forms are the product of printers and vary. Laws regarding deeds also vary slightly according to states, but the purpose is the same.

The practice of mortgaging is so commonplace that property values are sometimes estimated according to the size of the mortgage carried. In stable communities where prices are not fluctuating rapidly, mortgages may be taken as a rough estimate to commercial value, but families purchasing property for home use should not rely upon mortgages as a safe index of resale value without investigating the current methods of financing and evaluating property. Furthermore, a house, like clothing, is purchased for use, and its value must be reckoned in part at least by the way it will serve individual family needs. It may be worth more or less to a given family than the price it would bring if the owner tried to sell.

**Abstract.** An abstract is a legal document showing every-

# This Indenture Witnesseth, That the Mortgagor,

William Smith and Mary Smith  
 of the City of Squantum in the County of \_\_\_\_\_ and State  
 of Massachusetts Mortgage and Warrant, to John Doe  
 of the City of Squantum  
 County of \_\_\_\_\_ and State of Massachusetts to secure the payment of  
 one certain promissory note executed by them  
 bearing even date herewith, payable to the order of John Doe, dated January 2, 1938  
 due January 2, 1943, in the amount of Five Thousand Dollars  
 (\$5,000.00), with interest at the rate of five per cent  
 per year

the following described real estate, to wit:

Lot One (1) Block One (1) of Downtown Subdivision  
 (commonly known as 1 State Street, Squantum, Massachusetts)

Massachusetts  
 situated in the County of \_\_\_\_\_ in the State of Illinois, hereby releasing and waiving all rights under and by virtue  
 of the Homestead Exemption Laws of the State of Illinois, and all right to retain possession of said premises after any default  
 in payment or breach of any of the covenants or agreements herein contained.

And it is Expressly Provided and Agreed, That if default be made in the payment of the said  
 one promissory note, or of any part thereof, or the interest thereon, or any part thereof, at the time  
 and in the manner above specified for the payment thereof, or in case of waste or non-payment of taxes or assessments on said  
 premises, or of a breach of any of the covenants or agreements herein contained, then and in such case the whole of said  
 principal sum and interest, secured by the said one promissory note, in this mortgage  
 mentioned, shall thereupon, at the option of the said mortgagee, his heirs, executors, administrators, attorneys  
 or assigns, become immediately due and payable: And this mortgage may be immediately foreclosed to pay the same by said  
 mortgagee, his heirs, executors, administrators, attorneys or assigns: And it shall be lawful for the said  
 mortgagee, his heirs, executors, administrators, attorneys or assigns, to enter into and upon the premises  
 hereby granted, or any part thereof, and to receive and collect all rents, issues and profits thereof.

Upon the Filing of any Bill To foreclose this mortgage in any Court having jurisdiction thereof, such Court may  
 appoint Richard Roe or any proper person receiver, with power to collect the rents,  
 issues and profits arising out of said premises during the pendency of such foreclosure suit, and until the time to redeem the  
 same from any sale that may be made under any decree foreclosing this mortgage shall expire; and such rents, issues and  
 profits when collected may be applied toward the payment of the indebtedness and costs herein mentioned and described.  
 And upon the foreclosure and sale of said premises, there shall be first paid out of the proceeds of such sale all expenses of  
 advertisement, selling and conveying said premises, and reasonable dollars attorneys' or solicitors' fees, to be  
 included in the decree, and all moneys advanced for taxes, assessments and other liens; then there shall be paid the principal  
 of said note whether due and payable by the terms thereof or not, and the interest thereon.

Dated, This second day of January A. D. 19 38.

William Smith 

Mary Smith 



Courtesy of G. L. Cole and Co., Chicago.

Fig. 2. Standard mortgage form.

thing that has happened in connection with a certain piece of property. It shows changes of ownership, leases, mortgages,

The Grantor, Mr. Owner and Mrs. Owner, His Wife  
 of the City of Chicago in the County of Cook  
 and State of Illinois for and in consideration of the sum of  
 Five Thousand Dollars, in hand paid,  
 Convey and Warrant to Mr. Purchaser  
 of the City of Chicago County of Cook  
 and State of Illinois the following described Real Estate, to-wit:  
 Lot One (1) Block One (1) of Downtown Subdivision  
 situated in the City of Chicago in the County of Cook  
 in the State of Illinois hereby releasing and waiving all rights under and by virtue of the  
 Homestead Exemption Laws of the State of Illinois.

Dated, This Second day of January A. D. 19 38



Mrs. Owner



Mr. Owner



Courtesy of G. L. Cole and Co., Chicago.

Fig. 3. Deed form.

taxes, and assessments levied for paving, sewer, or other purposes. This information is taken from the public records kept at the local court house. An abstract is an individual history for property, being the means by which title and the liens against it are conveniently shown. It is of course, most impor-

THE MONTHLY COST OF BUYING OR BUILDING A HOME, PRICED FROM \$3,750 TO \$20,000, BY THE  
FEDERAL HOUSING ADMINISTRATION PLAN<sup>4</sup>

Assuming 80 Per-cent Loan	Monthly Payment Required																																		
	Under 10-Year Plan					Under 15-Year Plan					Under 19-Year, 6-Months Plan																								
Cost of House and Lot		Cash Required for Equity		Amount of Mortgage		Service Charge		H.A. Insurance		Fire Insurance		Taxes		Total		Service Charge		H.A. Insurance		Fire Insurance		Taxes		Total		Service Charge		H.A. Insurance		Fire Insurance		Taxes		Total	
\$3,750	\$3,000	\$1.20	\$1.25	\$6.25	\$1.17	\$41.70	\$23.73	\$1.23	\$1.25	\$6.25	\$1.17	\$33.63	\$20.10	\$1.23	\$1.25	\$6.25	\$1.17	\$30.00																	
5,000	4,000	42.44	1.60	1.67	8.33	1.56	55.60	31.64	1.64	1.67	8.33	1.56	44.84	26.80	1.64	1.67	8.33	1.56	40.00																
6,250	5,000	53.05	2.00	2.08	10.42	1.95	69.50	39.55	2.05	2.08	10.42	1.95	56.05	33.50	2.05	2.08	10.42	1.95	50.00																
7,500	6,000	63.66	2.40	2.50	12.50	2.34	83.40	47.46	2.46	2.50	12.50	2.34	67.26	40.20	2.46	2.50	12.50	2.34	60.00																
10,000	8,000	84.88	3.20	3.33	16.67	3.13	111.21	63.28	3.28	3.33	16.67	3.13	89.69	53.60	3.28	3.33	16.67	3.13	80.01																
12,500	10,000	106.10	4.00	4.17	20.83	3.91	139.01	79.10	4.10	4.17	20.83	3.91	112.11	67.00	4.10	4.17	20.83	3.91	100.01																
20,000	16,000	169.76	6.40	6.67	33.33	6.25	222.41	126.56	6.56	6.67	33.33	6.25	179.37	107.20	6.56	6.67	33.33	6.25	160.01																

\* Assumed at 2 per cent of actual appraised value annually. † Assumed at  $\frac{1}{2}$  of 1 per cent of assumed value of house at 75 per cent of the total cost of house and lot.

<sup>4</sup> "Building Your Home," *Better Homes and Gardens* (Des Moines, Iowa, 1937).

tant for purchasers to know whether or not they are acquiring title to property that is clear, or free from the risk of being obliged to defend their rights in case some person with a lien against it should appear. In case there are liens the purchaser may accept it subject to them, but knowing in advance he is in a position to make plans for handling them.

**Torrens system.** Of comparatively recent date in the United States a system has been established in some of the states whereby records are searched, titles established, and all transactions on property recorded. Property once in the Torrens system can be transferred with less cost since the records are established, and kept up to date so that the local recorders office can issue a certificate of title at less expense and thus eliminate the use of an abstract.

**Instalment plan.** Some persons find it difficult to save regularly to meet a mortgage payment, others do not know how or want to handle the financing of their homes with single mortgages; hence plans have been worked out of letting prospective owners make a down payment followed by regular monthly payments similar to rent. A portion of this regular monthly payment is set aside against the repayment of the mortgage. In other words, the financing agency whether private or federal, has a plan for accepting payment of the mortgage in small amounts regularly paid.

**Federal financing.** To encourage more individuals to build or buy homes the Federal government worked out a plan for making loans. The table shows the maximum amounts that will be loaned on buildings of different costs, and the charges. For example, if family A has a yearly income of \$2,000 and wants to buy a home costing \$3,000, at least \$750 must be accumulated to pay down at the time of purchase. This \$750 is their equity or share of ownership in the building. If they choose the longest payment plan, their monthly instalments will be \$20.10 in interest at 5 per cent on the \$3,000 mortgage, plus \$1.23 which is a service charge, plus \$1.25 for Federal Housing Administration insurance, plus taxes at \$6.25, plus fire insurance at \$1.17, or a total of \$30 per month for nineteen

years and six months. In other words, this family may acquire full ownership of the house in nineteen years and six months at this rate.

The table shows the payments for shorter loan periods also.

Recent changes have been announced in Federal financing reducing the insurance premium to  $\frac{1}{4}$  of 1 per cent and extending the maximum length of time for the mortgage from 20 to 25 years. Also the down payment now on homes costing less than \$6,000 is cut in half. That is, for a \$3,000 house the down payment may now (1939) be \$300 or 10 per cent of the total cost, and the mortgage \$2,700, or 90 per cent. The average monthly payment will then run at \$22 per month over a twenty-five year period.

**Buying on a contract.** There is still another plan for buying homes when the purchaser does not have money either to pay all or a substantial amount toward the purchase price. This plan is to buy on a contract. That is, Mr. A contracts with Mr. B to pay a given amount each month for a period of years or until the full purchase price has been met. No down payment is made, and the purchaser has no equity in the property. If he completes his payments according to the terms of the contract, he receives title to the property with the last payment. It is like a conditional sales contract and is different from buying subject to a mortgage, or buying and giving a mortgage. When property is bought with a mortgage, the title passes to the buyer subject to the mortgage, but in buying on a contract title does not pass until the last payment has been made. Thus there is greater risk to the purchaser when buying on contract since failure to complete his payments means loss of the money he has put into the property unless he can sell his contract without loss. When the payments can be met, the contract-for-a-deed plan gives the purchaser without capital, but a regular income, a chance for ownership.

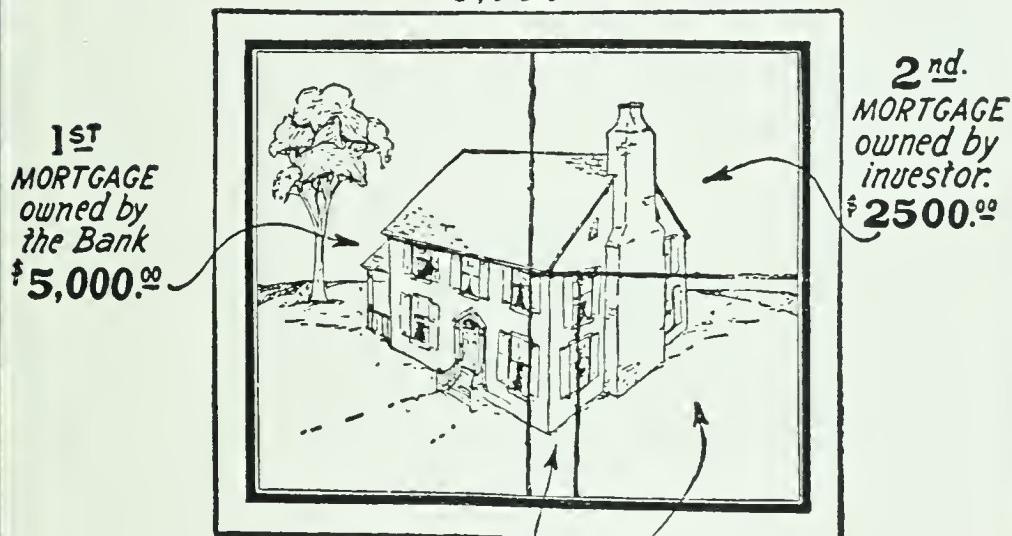
**Financing costs versus costs for housing.** When planning the family budget and making allowance for shelter costs, the items represented in this \$30 as shown in the table, are but a portion of those upon which one must plan. In addition to

financing the loan, there must be money for fuel, light, telephone, water, transportation, upkeep of the building, and any new improvements desired. In moving from one house to an-

## SINGLE FAMILY HOUSE

HOW MUCH OF YOUR HOME DO YOU OWN? —

SPACE INSIDE FRAME SHOWS TOTAL  
COST OF HOUSE AND GROUNDS  
**\$10,000.00**



**CRACKS IN GLASS MARK OFF SIZE OF  
INTEREST IN HOUSE OWNED BY OTHERS  
YOUR EQUITY IS WHAT IS LEFT AFTER  
OTHERS ARE REPAYED.**

Courtesy of A. Holden on Workers' Education Bureau Press.

Fig. 4. The proportion of your house that you own.

other it is well to investigate the probable amount of fuel needed, the gas, electric, telephone, and public transportation rates, as well as possible local charges for special police services, garbage collection, or the like.

Taxes and special city assessments vary widely in amounts but they must be counted on everywhere. In England tenants pay rent and "rates"; in the United States taxes are included in the flat amount known as rent. In the open country there will be no special assessments for street sewers, water, gas, or paving, but the owner will be responsible for the building and upkeep of his own septic tank or cess pool, if he has one; drilling his own well; installing his own gas plant; or building his road to the main highway. There may be a special assessment for drainage if a drainage district is created. The owner must heat his own house, pay for gas, electricity, transportation, painting of buildings, reshingling, new awnings, fence repairs, care and upkeep of the yard. If it is necessary for him to hire all the labor of running the furnace, sweeping the walks, and mowing the yard, as well as repairing the building, his bill is likely to be a sizable sum when he keeps up his property according to high standards. If he does the work himself, he may do it on his leisure and recreation time.

**Moving as a cost of housing.** Moving is a cost that belongs to housing. Persons who rent often figure on an additional month's rent or more to cover the cost of moving. Since in most cities there are definite leasing dates and moving times, much pressure comes periodically upon movers, usually at the first of May and October. Those who are able to move earlier or later may profit. In addition to the cost of the van there is need for packing materials and labor for crating and handling furniture. Nor is this all. The curtains and rugs needed for one place may be neither adequate in number nor size for another. Shelves may need to be put up in a new building and new pieces of furniture bought. Persons who contemplate moving should count and measure windows to determine whether or not to purchase new window hangings. Many buildings furnish shades. Some families, however, prefer to buy and use their own. By measuring floor areas and large pieces of furniture one can determine before moving where furniture can be placed. See Figure 5, page 171, for an illustration showing how patterns for furniture can be cut to scale and fitted onto

floor plans. When moving one can make full-sized patterns to fit onto the floor of the building into which a move is anticipated.

**Building depreciation.** Depreciation is a consideration of all property. From the time a building is completed it begins to depreciate. Shingles rot, paint wears away, doors warp, and innumerable depreciation changes occur. Substantially constructed buildings depreciate very slowly; poorly constructed buildings may be liabilities from the first day of occupancy. Not only are some shingles, paints, and woods more durable than others, but the workmanship of shingling, painting, making and hanging doors is better. Better materials and workmanship pay in the long run. The following quotation illustrates in concrete terms how replacements add to the cost of housing.<sup>5</sup>

In an average house the installation of one bathroom and the usual kitchen and laundry plumbing, using galvanized iron pipes and fittings for the water supply, costs \$360.50. In about 14 years this piping will require replacement at an estimated cost of \$548.60; \$172.40 for material and \$376.20 for labor, the high cost resulting from the need for breaking into walls and floors and for repairing this damage when the pipe replacement is completed.

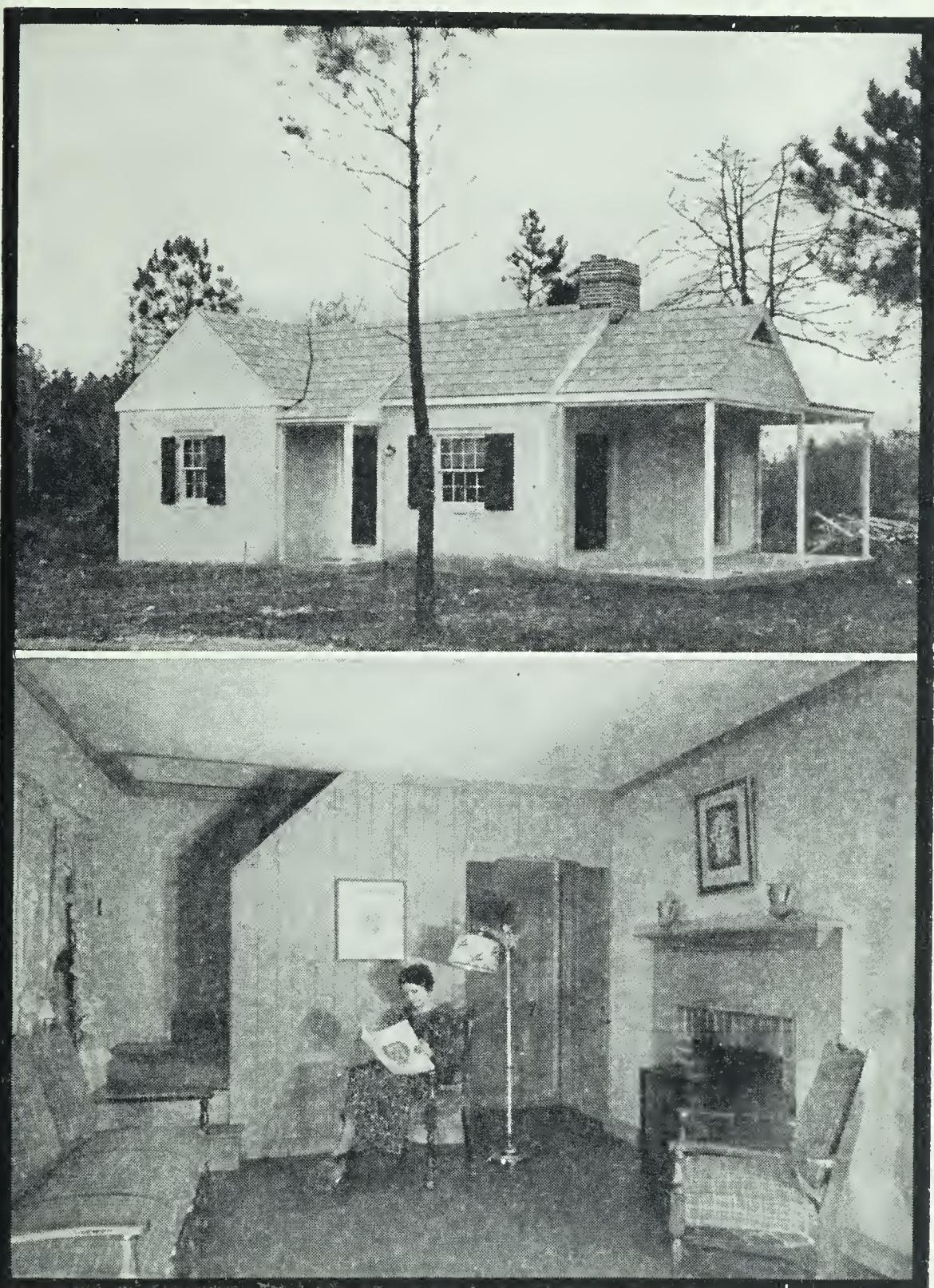
**Neighborhood depreciation.** Depreciation is of another kind also. Neighborhoods depreciate. Undesirable businesses or home owners of low housing standards come in and one after another of the former owners sell out, each glad to take some loss on the original investment in order to get away from the inevitable changes that seem undesirable. Most cities have their areas that show this type of depreciation. It is a risk of home ownership which the restrictions imposed by zoning aim to reduce. The cost of depreciation is a cost of all housing but a most difficult one to compute. The life of a building estimated in terms of the lasting qualities of materials and workmanship may be from a decade to several hundred years. But social

<sup>5</sup> *The Home Owner's Fact Book* (Anaconda Copper Mining Co.), p. 16.

changes in the neighborhood or new styles can alter radically the estimates that were made in terms of the physical life of the building. This type of depreciation influences the size of loan allowed by the Federal Housing Administration. For example, the maximum loan is allowed only on new housing in the best neighborhoods. Poorer neighborhoods may stand only a 50 per cent loan. Just as depreciation must be figured into the cost of owning and running an automobile, so too building depreciation is a cost of housing.

**Ownership an individual family problem.** When a family contemplates the ownership of a home without a sufficient amount of money on hand to pay for it, the financing should be carefully planned. Responsible members should know what income it is reasonable to count upon, should fully investigate the condition of the house, the neighborhood, and the local methods of pricing and financing homes. It may be that the income is too unreliable to warrant purchase of property or that the price of the property desired by the family is quite beyond the financial range of its consideration. Acceptance of too big a mortgage or too heavy a monthly instalment payment plan may mean that too little money is available for other necessities of living such as food and clothing; that growing sons or daughters are forced to give up school in order to take employment to help save the home; or that in cases of illness or business loss the family is entirely unable to meet their obligations so that the payments lapse and the property goes back to the owner from whom the purchase was made. All this represents financial loss to the family.

**What was the cost of owned homes in relation to family income?** It was found from the samples taken by the *Financial Survey of Housing in 61 Cities of the United States* that the owner-occupied homes represented from two to three times the yearly income of the families. Thus, if the family income was \$2,000 the cost of the house might be from \$4,000 to \$6,000. However, the \$2,000 family in a \$4,000 house could expect to pay for it, not in eight years which would be the length of time needed if 25 per cent of the yearly income were



Courtesy of S. Arthur Love, Architect, and Donald M. Love, Builder.

Fig. 5. House for shipyard workers in Newport News, Virginia.

set aside for housing, but in perhaps fifteen or twenty years. It must be remembered that the cost of housing in family budgets includes taxes, interest, insurance, heating, lighting,

telephone, care, and repair. If the total cost of housing is to be kept to \$500 a year or 25 per cent of the \$2,000 yearly income, the house must be paid for more slowly.

**Cost of multiple versus single dwelling.** Certain single building costs are immediately reduced in multiple dwellings. In a duplex or two-apartment building the same foundation and roof serve two rather than one as is the case in a bungalow or house. So also a single heating plant may be used. In a double house one central wall is shared by two otherwise independent houses. The apartment form of building offers the largest number of possibilities for reduced costs, owing to shared foundation, roof, walls, entrances, and services.

In this connection it is interesting to see what has been happening as regards the building and use of apartments. The results of a study show that,<sup>6</sup>

In 1921 in 255 American cities apartment houses furnished accommodations for 24.4 per cent of the total number of families provided for in new building; in 1928 the corresponding proportion was 53.7 per cent.

1. The increase was felt in an appreciable degree in cities in all sections of the country.

2. The apartment-house movement was much stronger in metropolitan centers and their suburbs than in independent cities. However, the amount of increase was nearly the same in the suburbs as in the metropolises and the apartment-house percentage of total families provided for approximately doubled during the eight years in all three classes of cities.

3. Cities with zoning ordinances had a much larger increase in multi-family house construction than unzoned cities.

4. Cities with the high indexes of community wealth and income generally had the higher apartment house increases.

Thus contrary to expectation, the results of the analysis up to this point suggest that well-to-do communities have changed more rapidly to apartment building than those with lower standards of expenditure, at least so far as the relation between number

<sup>6</sup> Coleman Woodbury, *Apartment House Increases and Attitudes toward Home Ownership* (337 E. Chicago Ave., Chicago, The Institute for Economic Research, 1931), p. vii.

of persons employed in domestic and personal service to the total gainfully employed is an index of community wealth. The poorer cities have on the whole moved less in the direction of apartment living than have wealthier ones of the same size.

**Consumers' reasons for choice.** Consumers were asked for their reasons of preference for either single houses or apart-



*Courtesy of Murray M. Peters, Photographer.*

Fig. 6. A Cape Cod cottage adapted to include the contemporary garage requirement, located in East Hempstead, Long Island, N. Y.

ment buildings, and these answers were collected. As you read them, ask yourself whether the people answering were thinking about the same houses and the same apartment buildings. Were their family circumstances the same?

#### REASONS FOR OWNING

- a. Payments to home ownership force me to save and "get ahead."
- b. Owning a house is cheaper than renting.
- c. Land values will probably rise in the neighborhood.
- d. Children are better off if their parents own the home.

- e. Owning a home gives me a sense of position and importance in civic and neighborhood affairs.
- f. Apartment districts lack sufficient parks and play space.
- g. I enjoy working around the house, making a garden, etc.
- h. Most of my friends own their homes.
- i. I believe that home ownership is a very safe form of investment.
- j. Instalment payment arrangements on the house encouraged me to start purchasing.
- k. The home owner is protected, he "always has a roof over his head."
- l. An owned home gives me a much more satisfactory place in which to entertain.
- m. Home ownership improves my credit.
- n. Apartment districts are too noisy and too congested for satisfactory living.

#### REASONS FOR RENTING

- a. Renting increases my bargaining power at my job; I can leave easily for a better position.
- b. Renting is cheaper than owning a house.
- c. I am unable to judge good construction in a house; the chance of poor construction in a house is too great.
- d. The type and character of residential neighborhoods change too rapidly to make buying safe.
- e. Renting increases my freedom; I am not tied down to one section of the city.
- f. The tax burden on home owners is too heavy.
- g. I am unable to judge land values; the chance of being sold a poor lot is too great.
- h. Financing charges for the purchase of a house are too heavy.
- i. Buying a house is a poor investment for me; it is too much like "carrying all the eggs in one basket."
- j. The expense incidental to the purchase of real estate (fees for title examination, commission, etc.) are too large.
- k. Renting allows one to adjust the size of the home to changes in the size and requirements of the family.
- l. I prefer to spend my savings for an automobile, a radio, and other comforts rather than for a house.

- m.* Investment in a house is too fixed; it is difficult to sell at the times when one needs the money.
- n.* In rented rooms I have the use of more modern equipment and furnishings (such as electric refrigeration, kitchen appliances, etc.) than I could afford to buy and install in a house of my own.
- o.* Instalment payments for a house are too heavy in times of business depression and unemployment.
- p.* Apartment-house living relieves me of the annoying jobs of mowing the lawn, shoveling the snow, etc.
- q.* All residential neighborhoods with good transportation have too high land values.
- r.* Servants cannot be secured for the care and upkeep of a house.
- s.* I prefer to use my savings for travel, or the children's education rather than for a house.
- t.* I believe that building prices are inflated and probably will come down within the next few years.<sup>7</sup>

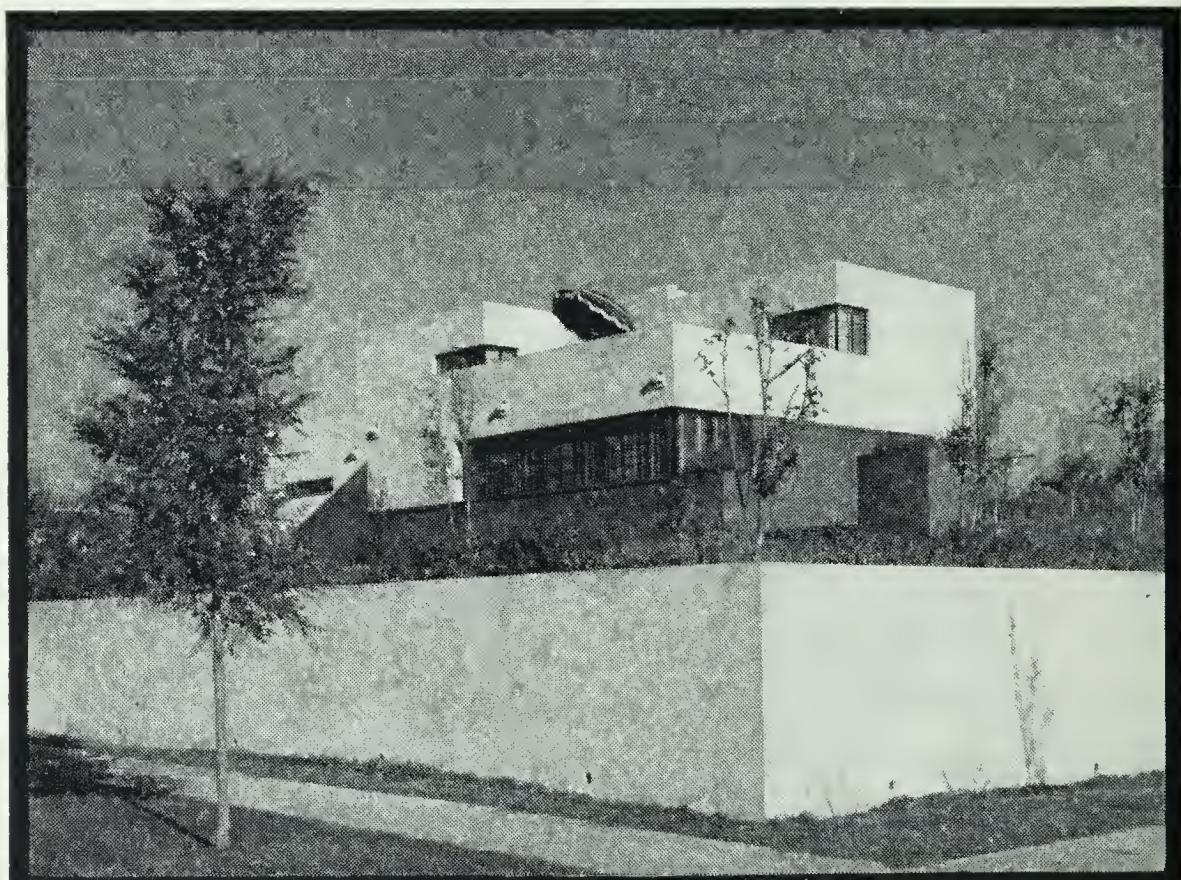
It is obvious that much difference of opinion exists without consideration of facts. The persons answering made generalizations upon the basis of personal experience and put emphasis upon form rather than quality of building and services rendered. One should remember that there are both good and bad features among single houses as well as apartments.

**Cost versus value.** Just as one may pay fifty cents for the same menu, preparation and service of food in one place and a dollar in another, so too the cost of the same house will be more in one place than another. Likewise the cost of labor and materials may be greater in one year than another so that the same building will vary in cost from time to time. A house built in Chicago in 1900 for \$9,000 was impossible to duplicate in 1925 for three times this amount.

**Space.** From an architectural point of view the cost of space may be computed in terms of cents per cubic foot. See illustrations (portfolio section) that show the better types of planning for functional space. From a home-making point of view the cost of space will be in terms of the use that can be made

<sup>7</sup> *Ibid.*, p. 26.

of it. If there is much waste space in badly planned halls or rooms, one may be renting or buying useless space. It is therefore highly important to the occupants of buildings that houses be functionally planned. See Figure 1, page 307. Study first floor plan, Figure 7A and explain how it is a good example of compact arrangement and functional planning.

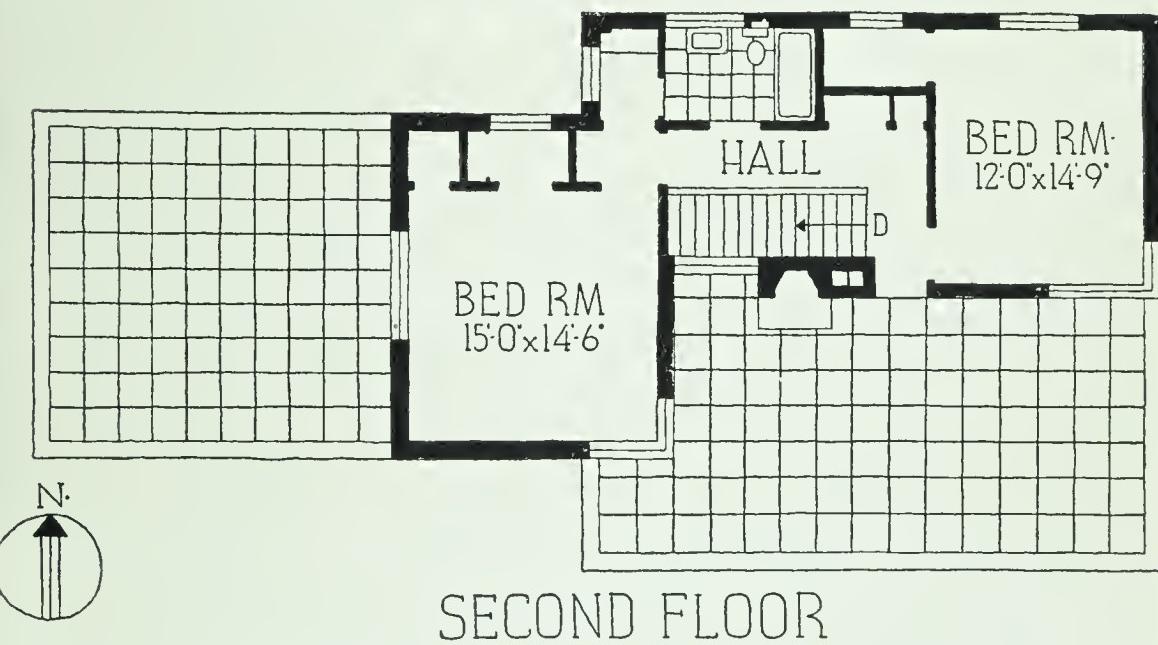
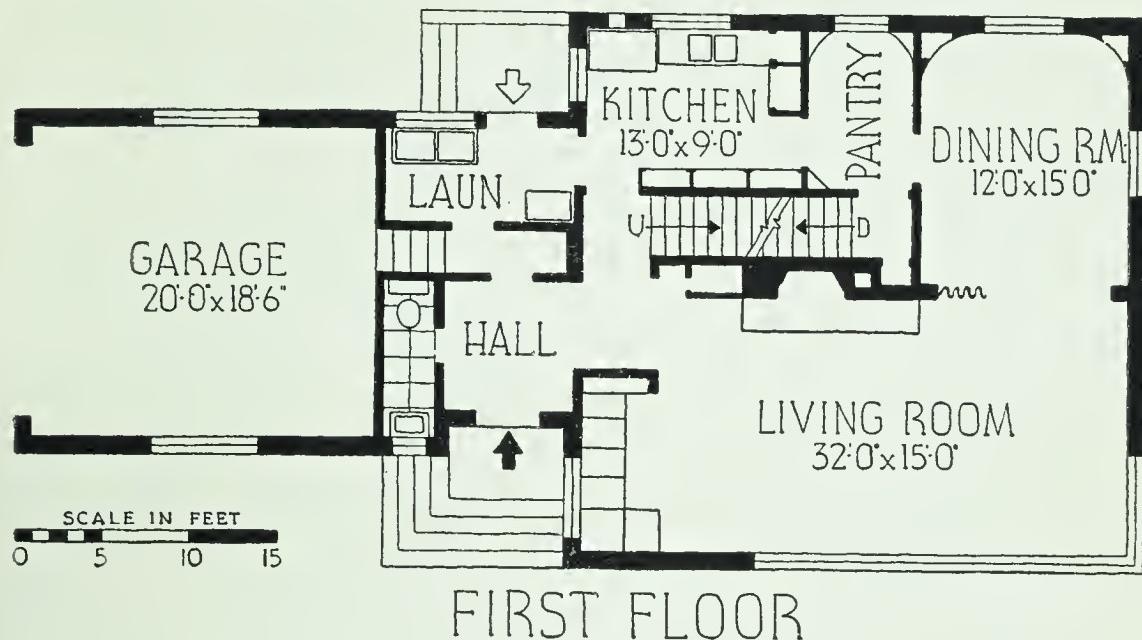


*Courtesy of C. F. Hegner, Architect.*

**Fig. 7. A modern house located in Denver, Colorado. See plans for the interior on page 399.**

But space is only one of the values of housing. The questions of the divisions that follow should direct your thinking and suggest further considerations relative to values in buildings familiar to you.

The purchase price of a house or the amount of rent charged are often poor indicators of values. When buying food one purchases calories, minerals, vitamins, cleanliness, and service. If you have read the preceding chapters, it is easy to under-



*Courtesy of C. F. Hegner, Architect.*

Fig. 7A. Plans for compact arrangement in a modern house.

For the exterior of this house, see the picture on page 398.

stand that when buying or renting a place for a home some of the values one purchases are space, protection, security, possibilities for healthful living, building services, privacy, freedom to live according to one's own family pattern, public transportation, community assets, beauty, and respectability or social position. One finds these values in different forms and amounts

so that the problem of selecting or planning for homes is one of choosing from among the available places to fit individual needs, desires, and circumstances. What one can afford may be poor in values.

The quotation illustrates the need of understanding plans for financing and of having other indicators than price for judging the value of housing.<sup>8</sup>

A crooner, an orchestra popular with debutantes and a price tag of \$7,990 were the major inducements used to sell houses in Radiant Valley in 1929. Customers drove the one hour from the Big City in unprecedented numbers. Salesmen showed the five-room house in person, pointing with pride to lavender bathrooms, romantic breakfast nooks, and the phantom of rambling roses. Prospects for the five-room bungalow were merely given direction and Godspeed. In twenty fast-speeling months the developer sold 1,000 houses. He left.

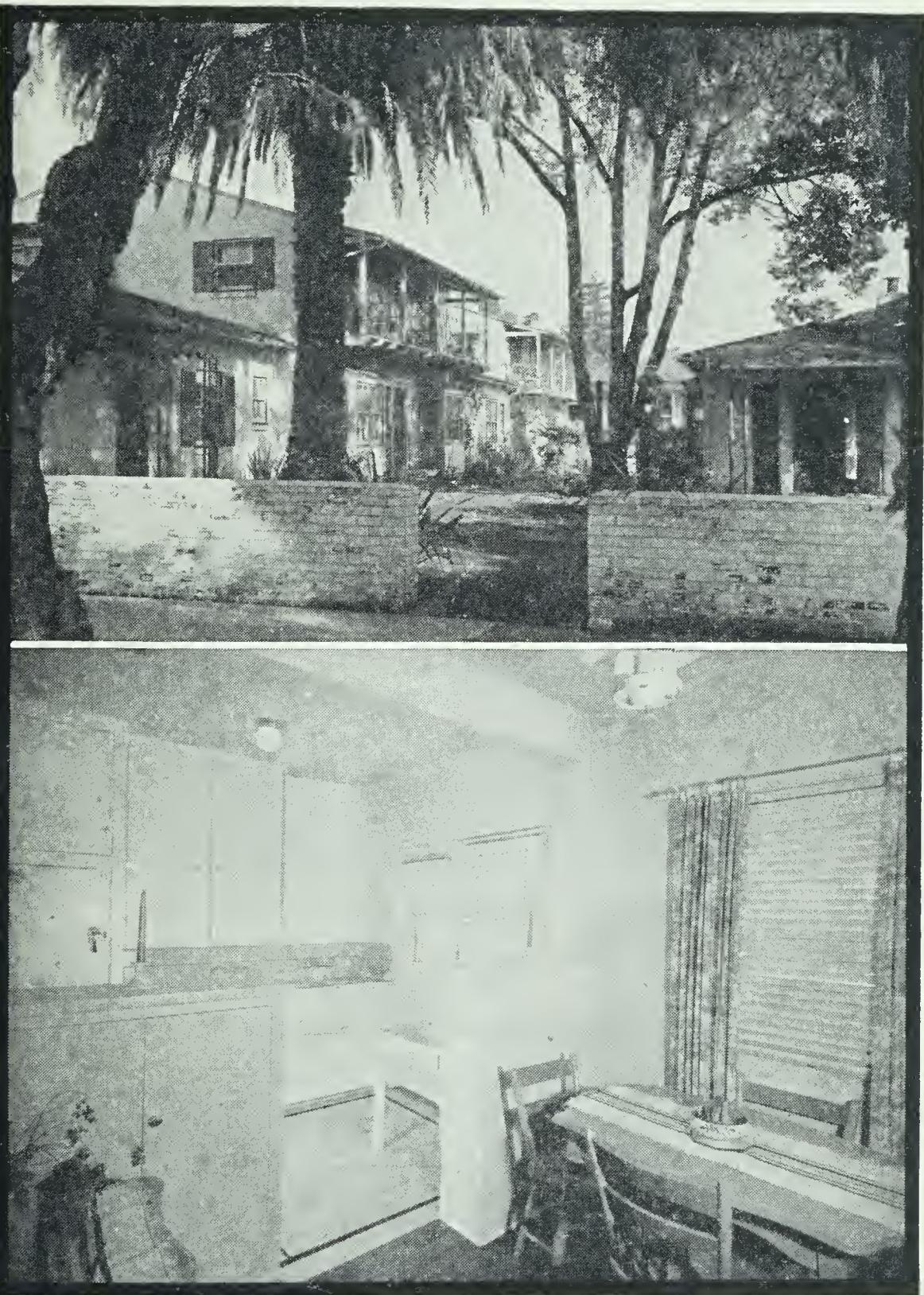
The true value of the township of Radiant Valley, Inc., is not to be appraised at a glance; you must live there awhile first. One day you will draw aside the stiff starched dimity curtains and realize for the first time that every house on your block abuts on the identical building line. One night you will remark all unconsciously to yourself that the neighbors are having corned beef and cabbage for the second time in a week, and that their conversation is rather dull. Radiant Valley lots run 40 by 55 feet.

The cost of these houses when sold was presented as \$7,990 with only \$800 paid down and monthly instalments of \$57, \$35.95 of which was interest on \$7,190; \$1.05 fire insurance on \$8,000; and \$20 to reduce the mortgage.

Cash .....	\$800.00
Interest on \$7,190.....	\$35.95
Taxes paid to 1930	
Fire insurance on \$8,000.....	1.05
Payment to reduce mortgage.....	20.00
	57.00

But then it was found that there was a special assessment for streets, utilities, and lighting to pay. That amounted to \$500,

<sup>8</sup> "Community Patterns," *Architectural Forum*, April, 1936, pp. 244-47.



Courtesy of Scott Quintin, Architect.

Fig. 8. Latest trend in apartment building.

"A widespread trend in apartments is illustrated by the group shown here in Pasadena, California, not so much in the exterior design as in the use of low units, spaced far enough apart to ensure adequate light and air for all tenants. The site for these apartments is only two blocks from the main business street of the town, and the buildings were designed to accommodate families where both husband and wife are employed, maid service being provided by the management."—*Architectural Forum*, May, 1937.

amortized over ten years at 8 per cent. After 1930 there was a tidy amount of \$199 in taxes to be met every year. The yearly finance plan actually taken on was

Interest on \$5,000 first mortgage at 6 per cent.....	\$300.00
Interest on \$2,190 second mortgage at 6 per cent....	131.40
Amortization at \$20 per month.....	240.00
Taxes .....	199.00
Fire insurance.....	12.60
	<hr/>
	\$883.00

After 1930 instead of \$57 per month, it actually cost \$74.58 to live in the houses.

Owning for home use involves special business abilities. To buy intelligently one must be able to evaluate property or to get reliable assistance, know the items to be counted upon in computing the total or actual cost of housing, and understand the relation of upkeep to the deterioration and depreciation of buildings. The individual owner may elect to perform these services for himself or he may employ others to do certain types of work for him thus retaining general responsibility and management. The person who rents pays an individual or agency to do all this work for him. Whether or not it pays the individual to own will depend upon how much time he has for this work, how expert he is in evaluating property or constructing a new building, how successfully he can manage, and what values he wants most in his home.

## PROTECTION

What kinds of protection does the building give?

Is it well constructed so there is no danger from sagging floors, cracking walls, falling plaster, leaking plumbing, overloaded electric wires, badly constructed stairs, etc.?

Is it substantially enough built to keep out the weather?

Is it located where flood waters may not sweep it away or deposit filth in its basement and walls?

Is it of fireproof or semi-fireproof construction so that one would have time to escape in case of fire?

Is there any danger from rats, squirrels, or termites, or is it rat-proofed and supported on steel or treated wood beams in which termites do not work?

Are there necessary locks, fences, or other similar forms of protection?

Is there insurance for protection of loss from fire, tornadoes, floods, and earthquakes?

## SECURITY

Is the financing so planned that it will not be necessary to move suddenly?

If you are buying property have you investigated all possibilities of charges not shown in the original price?

Are the necessary legal papers properly made out and registered according to law?

Do you know what your income will be for the coming year and how much may be allotted for housing?

If you rent, have you a lease? Have you read it?

Are you dealing with a reliable landlord and agent?

## HEALTH

Is the building safe?

Is it free from dampness that promotes the growth of mold?

Does sunlight get to all rooms?

Can the house be kept warm enough for health with a sum that you can afford to spend for fuel?

Is it possible to ventilate easily?

Can the house and grounds be kept sanitarily clean? See the chapter on health for details.

## BUILDING SERVICES (*Equipment*)

How many services are provided by means of mechanical equipment such as electric or gas stoves, mechanical refrigerators, electric garbage grinder, building incinerator, thermostatically controlled heating plant, etc.?

How many services are provided by built-in furnishings such as in-a-door beds, cupboards, drop leaf tables, book cases, etc.?

*Human services*

How many services of a janitorial nature such as care of the furnace, cleaning of the halls, entries, washing of windows, etc. are included in the rent of the building?



*Courtesy of H. I. Feldman, Architect.  
Harold Haliday Costain, Photographer.*

**Fig. 9. The traditional apartment building.**

"The elevator-type apartment building appears in its most reasonable form in some of the New York suburbs, where land values are sufficient to induce owners to build high, moderately isolated apartments which receive ample light and air, and have views more pleasing than the rear of similar buildings. In Hartsdale, about thirty minutes from New York by train, this recently completed apartment house is typical of the best suburban work being done."—*Architectural Forum*.

Is desk service for packages, mail, telephone calls, etc., a part of the rent?

Is daily maid service a part of the rent charge?

**PRIVACY**

How independently can you live?

How much will you hear of your neighbor's conversations and how much will they probably hear of yours?

How many families use the same entry and halls?

How many persons will use the same yard, laundry, or porches?

To how great an extent will you be expected to be a part of *all* the social activities of the town or neighborhood?

## TRANSPORTATION

What kind of public or privately owned cars or vehicles are available?

How often do they run?

Are they clean, comfortable, and not overcrowded?

What are the charges?

How safe is the service?

## COMMUNITY ASSETS

What type of schools has the community?

Is transportation necessary for the high-school members of the family?

Do the courses offered prepare for college or are they vocational?

Do the schools bring persons to lectures given on topics of general interest to citizens in the community?

How much recreation and social life comes through the schools?

What kind and how many libraries are available?

What kind of parks do you find? What forms of recreation go on in them? Are there provisions for games, study of flowers or animals? Are there history or art museums?

Are there musical organizations that bring the best forms of music into the community?

Are there musical societies that give an opportunity for persons interested in music to perform in them?

## BEAUTY

Are the houses planned for beauty as well as use?

Are there trees and plantings about the buildings? Are they well planned in relation to the buildings?

Are the yards kept clean and mowed?

Are the streets planned for beauty?

Under the discussions of location, architecture, and furnishings many further suggestions are to be found for questions relating to the value of beauty in housing.

### PROBLEMS

1. A earns \$15 per week and lives at home. The family lives in a six-room apartment the rent of which is \$60 per month unfurnished. If A pays 20 per cent of \$15 into the family budget for rent, occupies one furnished bedroom alone, and shares the use of the rest of the house, how far is A's money going in covering the rent of the bedroom, laundry, and use of room furnishings? How far is it going toward paying for the use of common living-rooms?

2. Mrs. B runs a large establishment where several persons are employed to help with the work of the house. She pays them at the rate of 30 cents per hour and charges \$7 per week for room and board. How many hours does an employee work to pay for room and board?

3. The X Club charges \$6 per week for a room with breakfasts and dinners. If the resident is employed at work paying \$11 per week what per cent of the income is used for room and two meals? If lunches can be purchased at work for 20 cents per day, 6 days of the week, and cost 35 cents in restaurants on each of the other two days, what percentage of the income is going for rent and food?

4. If the B family rents an unfurnished house at \$50 per month; have a yearly coal bill of \$200; pay 50 cents per month for 6 months to have the ashes hauled; replace a basement window at \$2, broken while dumping the coal; pay an average of \$2 per month for gas; \$2.50 for electricity; \$3 per month for telephone; \$1 per week from May 1 to October 1 for mowing and raking the lawn; \$3 per week for having the windows washed, the porches and garage cleaned, and the kitchen and bathroom floors scrubbed, how much is the B family paying for their housing? How much is this per month? If they live in the house two years and are obliged to spend \$18 for new curtains, \$22 for a new linoleum rug for the kitchen, \$1.75 for oilcloth to cover the pantry shelves and \$55 for a van and the labor of moving, how much additional must be added to compute the yearly cost of

their housing? What would be the monthly cost if distributed? For which items might there be a salvage value? From which is there none?

5. As a home project assume the responsibility of paying all bills attached to the cost of living in your home and keep a record of them. If it is a rented apartment and gas, electricity, or other service charges are additional be sure to include them as well as repair of a window broken or other damage to property for which you or members of your family are responsible. Also include the price of new furnishings and equipment, the wages paid to either man or woman employee who does household work. How much transportation cost can be charged to the location of the apartment or house? If you live in a house, the variety of items will be wider for taxes, insurance charges, city water, or heat, etc., and should be included. At the end of a one or three months' period study them and sort out those that recur every week, every month, less often. Multiply the weekly bills by fifty-two and the monthly bills by twelve to find the yearly cost. Compute the yearly cost of bills paid less frequently than once per month by estimating how often they will occur in a year's time. Approximately how much does it cost to live where you now are?

#### REFERENCES

##### Books

LAWRENCE, Josephine, *If I Have Four Apples* (New York, Fredrick A. Stokes Co., 1935).

##### Bulletins

Maine Extension Service, Orono, Maine, "Tourists' Homes in Maine," Bulletin No. 231, December, 1936.

United States Department of Commerce, Washington, D. C., "The Minimum Standard for Working Women," *Labor Information Bulletin*, Vol. 5, No. 2, February, 1938, p. 5.

##### Magazines

*Better Homes and Gardens*, Vol. 16, No. 8 (April, 1938), "Good News," p. 13.

*Building Your Home*, "Financing Your Home," p. 8 (Des Moines, Iowa, Merideth Publishing Co., 1938). Price \$.50.



## INDEX

All numbers set in black face refer to pictures in the portfolio sections.

- Abstract, 383  
Activities, household management, 233  
Adaptation, local geographic, 363; community, 364  
*Adequate Maintenance and Protection of Health for Women Workers in New York State*, 379n  
Adjustments, 131, 138, 139, 256; age needs, 145, 146, 147; to group and building, 214; continuous process, 219-223; furniture, 205, laboratory equipment, 207, new equipment, 223; of plans, 218; school girls in cottage, 219-221; working girls in apartment, 214-218  
Advice, 328  
Aged, care of, 250  
Air circulation, 66  
Air-conditioners, household, 110  
Allergies, 73, 74, 92; definition of, 110  
Amalgamated Clothing Workers, 62  
Anthrax, 105  
Antitoxins, 105  
Anopheles, 106  
Apartment building, Pasadena, 401, 41; furnished, 380; location, 350; plan of small, 137, 138; traditional, 404  
*Apartment House Increases and Attitudes toward Home Ownership*, 394n  
Appropriateness, 183  
Apron, scrub, 222  
Arrangement, symmetrical, 9, 10, 24, 32  
Ash trays, care of, 30  
Asphyxiation, 86  
Athlete's foot, 109  
Atmospheric dirt, 322  
Attitudes, group related to management, 213; toward housing, 159; toward home ownership, 394  
Baby, time cards for care of, 238-250  
Backyard, apartment improvements, 54; improvement of, 59  
Bacteria, transmission of, 92-107  
Bacterial diseases, 92-107, 205  
Balance, 168-172; 201, 202, 358, 359; asymmetrical (occult), 170; color, 170, 171; furniture in rooms, 171; symmetrical, 170  
Baseboard, type of, 2, 8, 14, 30  
Basement, improvement of, 55  
Bathing, work related to, 234  
Bath mat, 216, 265, 270  
Bathroom, 22  
Bath towels, 31, 264, 265, 293

- Bath tub, courtesy in use of, 31  
Beauty, 3, 68, 123, 257, 358, 405  
Bed covering, 187  
Beds, care of, 233, 234  
Bedspreads, as covers, 39, 193; illustrated, 14, 19, 31, 37, 38  
Bed springs, relationship to wear on sheets, 218  
Bedroom-study, 200, 18  
Better living conditions, 62  
Black Death, 94  
Blanket, 295, 296; sizes, 296; wear of, 267  
Blockfront desks, 194  
Brick, glass, use of, 4; wall, 7  
Broken glass, a hazard, 88  
Broom closet, 13  
Building codes, 81; influence on individual, 135, 136; influence upon manner of living, 137; overcrowding, 96; services, 399, 403; standards, 74  
*Building Your Home*, 125, 387  
Built-in furniture, bed, 16, 18; bookcases, 6, 7, 21, 29, 30; desk, 18; kitchen, 12, 13  
Burns, 85  
Buyers, questions for, 292  
Buying, on contract, 388
- Calcimine, 46  
Calm, 3  
Cancer, 109  
Caning and splint weaving, 51  
Canopied beds, 184, 19  
Cape Cod cottage, 395  
Capital, 370  
Carbon monoxide gas, 86  
Care, of household materials, 44; of wraps, 28  
Carpet, depth of pile, 303; *see also* Portfolio sections  
Casement cloth, 193  
Ceiling, beamed, 28
- Census, 1930, 204; size of families, 147; groups, 214  
Chair, Hepplewhite, 10, 29; purchase of, 286-288  
Chest of drawers, 17, 24  
Chigres, 108  
Children's Bureau, study, 7, 8  
Children, care of, 213  
"Chills and fever," 107  
Chippendale, 196  
Choice of materials, 44-47; Ch. 7  
Chores, 237  
City departments of engineering and building construction, 81n  
*City Gains on the Country, The*, 139n  
City gardens, 59  
City, home equipment, amount, 75; ordinances, 154, 348  
Cleanliness, 203, 205  
Cleaning, 236, 237; woman, 313  
Climatic influence, 4; on housing, 140-142  
Closet, 20, 23  
Clothes bag, 23  
Coal bin, relationship to curtains, 218  
Cockroaches, 108  
Colds, 102  
Colonial furniture, 194  
Color, 172-179; effects, 178, 179; hue, 173; intensity (chroma), 174; pigments, 173; relationships, 178; texture, 175; value, 173  
Comfort, 3, 67  
Comforter, 296  
Common use, 27  
Community, adaptation to, 364; assets, 405; cultural, 158; disintegrating force, 157; patterns, 400; project, 56; values, 346, 348  
Composition, paint, 283

- Confusion, 33  
Construction, 15; new building, 5  
Consumers, 1, 12, 13, 370; reasons for choice of housing, 395-397; of household materials, Ch. 7  
Consumption standards and housing, 19n  
Contract, 388  
Control, noise, 156; by means of building, 156  
Convenience, 3, 157  
Cook, 312  
Coöperation, 27, 29, 30, 31, 32  
Coöperative spirit, 26  
Cosmopolitan population, 5  
Cost, Ch. 10; of household machines, 291; of moving, 390, 407; multiple versus single dwelling, 394; owned homes, 392; versus value, 372, 397, 400  
Cotton, 268, 286  
*Country Kitchens*, 137n  
Courtesy, 28, 219; household, 28-32  
Crocking, 277  
Curtains, 187; effect of sunlight on, 278; cost for care, 35; closet and wardrobe doors, 36; glass, 33, 34; making of, 32, 35-37; need for care, 34, 35; for privacy, 36; types of; *see also Portfolio sections*  
Cuts and scratches, 88  
  
Dado, 2, 8  
Daily problem of living, 9  
Damask, 302  
*Days Before Yesterday, The*, 135n  
Decoration, applied, 51; *see also Portfolio sections*  
Deed, 383, 385  
Delinquency, 158  
Demonstration, 315  
Dependent adults, care of, 213  
Depreciation, building, 391; neighborhood, 391  
Design, furniture, 184, 185, 186; historical influences, 184-186, 194; historic influence in chairs, 196; structural, 51  
Deterioration, 8, 23, 78, 154, 193; neighborhood, 81  
Design, modern, 4, 18, 35  
Destruction, 8, 14  
Dining alcove, 9  
Dining-room, "budget," 8; formal, 10  
Diphtheria, 104  
Directions, need for, 208; making, 208; guides for laboratory duties, 208  
Diseases, bacterial origin, 93; carriers, 3, 103-107  
Dishes, 303, 304  
Dish-washers, mechanical, 290  
Dog bites, 105  
Domestic service, 314  
Doors, 359-361  
Double house, 149  
Draperies, 33, 34, 268; fabrics, 34; lined, 36; *see also Portfolio sections*  
Dresser, 19, 38; covers, 38  
Dressing table, 20  
Duncan Phyfe, 31, 32; 184, 186, 194  
Duplex, 149  
Durability, 162, 187, 193  
Dutch Colonial, 5  
  
Economic security, 3  
Effects, informal living-room, 180, 6  
Eight-hour day, 309  
Electric fans, ventilation, 114; refrigerators, 211; shocks, prevention of, 87

- Elevators, household use of, 115  
 Emotional disturbances, 98, 123; strains, 73  
 Emphasis, center of interest, 179  
 English influence, 5  
 Enjoyment, 28  
 Entertainment, friends, 123  
 Environment, 76, 259; social, 123  
 Epidemics, 83  
 Equipment, 321; machines, 289-293  
 Esthetic qualities, 3, 209, 210; values, 319  
 Experience, a means to learning, 215, 216, 217, 219  
 Exposure, to wind, 351  
 Exteriors, 355  
 Eye strain, 115
- Fabrics, functional, 186  
 Façades, 358  
 Fading, paint, 283; textiles, 277; tests for, 277  
 Falls, 84  
 Family, interests of observed in decoration, 6; size, 147; size and dependency, 322  
 Family living, 27  
 Farm home, 141, 142; equipment, amount of, 74  
*Farmers' Standard of Living, The*, 7n  
 Fear, child's, narrative illustration, 135, 136  
 Federal aid, 4; financing, 386, 387  
 Federal Housing Administration, 58, 60n  
 Feeling, proportions, 162-169  
 Fibers, 266, 286; diagram of, 272; identification of, 272, 273; mixed, 270, 271  
 Filing, 209  
 Films, 72
- Filterable virus, 93  
*Financial Survey of Housing in 61 Cities of the United States, A*, 382n, 392n  
 Financing, 388  
 Finishing, effects of, 274, 275  
 Firearms, care of, 87  
 Fireplace, courtesy in care of, 30, 31; *see also* Portfolio sections  
 Fireproof construction, 82  
 Fireproofing solution, for garments, 86  
 Fires, prevention of, 87  
 Fire wall, 83  
 Flexibility, 219  
 Floods, 83  
 Floor, coverings, 186, 187; parquet, 17, 29; plan, temptation for overcrowding, 148; plans, 10, 133, 137, 142, 148, 149, 153, 171, 172, 202, 253, 307, 353, 399; shapes, relation of covers, 168; stone, 28; tile, 7, 22  
 Food and Drug Acts, 4  
 Food, grater, 297, 298; pollution, 103; sanitation, 205, 206; work related to, 234, 235  
 Foot and mouth disease, 105  
 Freedom, 3, 155, 399; of choice, 338  
 French provincial, 5  
 Friction, social, 68  
 Friends, 339  
 Function, 186, 187, 353, 363, 398; floor plans, 356; household fabrics, 186; curtains, 184; rooms outlined, 188  
 Functional furnishing, 183; stove, 182  
 Furnished apartments, 380, 381  
 Furnishing, 162; impressions, 199, 200; home problem, 198, 199, 200, 201; modern, 197

- Furniture, arrangement, 171; limited possibilities for arrangement, 172; care for safety, 30; covers for, 37-43; commercial patterns for covers, 39; designs, 50, 51; purchase of, 285, 289; *see also* Portfolio sections
- Garbage burners, 66, 86; can, 105
- Gardens, city 59
- Gate-legged tables, 194
- General worker, home-maker's assistant, 313
- Georgian houses, 5
- Glass brick, 4, 199; curtains, 186
- Glass, translucent window panes, 18
- Gonorrhea, 100
- Government agencies, 4; sponsorship of projects, 62
- Gracious living, 9
- Grading fabrics, 278, 279
- Grim Society of Termites, The*, 30n
- Group ownership, 152
- Guides, purchase of paint, 284
- Habits, family, 130
- Happiness, 3
- Half-timber house, 5
- Harlem River Houses, 62
- Hat box, 23
- Health, Ch. 3; pages 399, 403; individual home inspection, 116-118; machines as aids, 290, 291; physical, 123
- Healthful environment, 3
- Heart, strains, 115
- Heating and ventilation, individual inspection, 121
- Hepplewhite, 196
- Hernia, 115
- High boys, 194
- High rents, 8
- Historic influences, 5
- Home, city as place of business, 143; cost of financing, 381-386; improvements, extensive nature of, 23; improvements, general and individual, 64; individual family, 64; income activities, 141-143; project, high-school girl's, 53
- Home in the Country, A*, 139n
- Home-maker, 204; ability, 323
- Home-making, 26; social process, 128
- Home Owner's Fact Book*, 391n
- Home Owner's Loan Corporation, 4
- Homestead, Cumberland, 139; subsistence, 140
- Hooked rugs, 7
- Hookworm, 107
- Hours, household labor, 317
- House, repairs, report of, 32; wooden (*A Century of Progress*), 366; proportion, 357; shape, 357, 358; balance, 358; 359; mass organization, 359; surfaces 361
- Household, accidents, 83; courtesies, 64; evolving nature of, 323; working conditions, 67
- Housekeeper, 313
- Housekeeping, 26; 204; job, 203, 211; patterns, 225
- Housing, 1, 3, 4, 5; and spread of measles, 94; of beet field workers, 95; attention focused on, 21; commercial problem, 8; consumers of, 6; contributions to human health, 13; cost, 388; an effective environment, 1; evaluation of, 6; failures, 21, 76; human versus animal needs in, 16; influences, 9; needs, influence of employment on, 9; influences, generation to genera-

- Housing (*Cont'd*)  
 tion, 9; needs, general, 1; need for study of, 13; newness of study, 5; part of wage, 324; a problem of living, 5; producers of, 6; progress, 13; projects, 1, 6, 62, 337; how projects aid, 63; rent, 375; regulations, inadequate, 6; standards, 58, 350; subject for high-school study, 20; toward better standard, 20; value of good examples, 13; relation of income to, 16
- Housing America*, 6n, 75n
- Housing and Malaria*, 106n
- Housing Aspects of Resettlement*, 139n
- Housing Code Recommended for Use by Municipalities of the State of New York*, A, 82n
- Housing Division of the Public Works Administration, 60
- Housing projects, 39-45
- How to Abolish the Slums*, 97n
- Human, needs, 3; factor, 194; habitation, 3
- Humidity, 3; need for, 114
- Hygiene, personal, 120
- Hygienic practice, colds, 32
- Ideals, 151
- Immunity, 93
- Improvement, home, Ch. 2; constant process, 26; home versus house, 27; nature of, 26; suggestions, 64; apartment building, 24, 25
- Improvements, carpentry, 49-51; nature of home, 52; physical, 26; planning, 26; simple, 26; complex, 26; social, 26; variety, 28
- Income, influences upon housing, 144; money, 372; real, 372; sources, 373; undependable, 4
- Individual responsibility, 17
- Inspection, individual home, 116-121
- Installment plan buying, 289; plan, 386
- Insurance, 371; Federal Housing Administration, 386, 387
- Interruptions, 259; 324
- Inventory, 255
- Irritations, removal of, 157
- Isolation, control of disease, 102; extreme social, 158
- Is the Modern Housewife a Lady of Leisure?* 11n
- Items of cost, 371
- Job, analysis, 224, 225; organization, 259
- Kitchen, orderly, 12, 13, 260; effect of awkward arrangement, 217; of small house, 44
- "L" Garden Contest, 59
- Labeling, 206-208
- Labor, building management, 326; classification of, 312; general character of household, 310; resident, 306, 307, 309; form of purchase, 308; household, 306
- Laboratory, 204; management, 203
- Lack of insight on part of planners, 9
- Ladder-backed chairs, 194
- Laundering, 237
- Laundress, 313
- Laundry, relationship of commercial to home, 215, 216, 237
- Lease, 376
- Legislation, 4; enabling, 4
- Leisure time, 69
- Library, 27, 29, 30

- Lights, 66, 115  
Linen, 268, 269, 286; table, 302  
Linoleum, 9, 12, 13, 20, 187; printed, inlaid, 304  
Living, 18; building an aid to, 151; conditions, 4, 324; conditions, improvement of, 26; conditions of, 259-260; group patterns of, 128; living-dining-room, 199; manner of, as seen through floor plans, 133, 137, 142, 148; social, 123  
Living-rooms, 1-7, 25-30, 34-36  
Loans, 4, 382-389  
Location, Ch. 9; apartments within buildings, 350  
Lock jaw, 104  
Low-rent housing programs, 60  
Lung, section of human, 113  
Luxury standard, 150  
  
Machines, household, 289-292  
"Maid's" room, 307  
Malaria, 106  
Management, Ch. 6, 210, 211, 212; activities of, 233; aim of, 212; intelligent, 261; plan of employed girls, 214-216; relationship of jobs to, 223  
Masses, architectural, 359  
Materials, household, Ch. 7  
Measles, Glasgow study of, 94  
Measurement, 280, 281  
Mending, garment-making, knitting, embroidery, weaving, rug-making, 238  
Mercerizing, 276-277  
Metropolitan Life Insurance Company, 84  
*Minimum Requirements for Safe and Economical Construction of Small Dwellings*, 82n  
Mobility, 155  
Modern furnishing, 197; house,
- Denver, 398; improvements, lack of, 7  
Molding. *See Portfolio sections*  
Mortgage, 382-384, 386, 387, 389; first and second, 383; foreclosure, 4  
Motives in building, 3  
Moving, 390  
Multiple-unit housing, 148, 149  
  
Napkin, cotton and linen, 271  
National Committee on Household Employment, 317  
National Board of Fire Underwriters, 80  
National Housing Act Amendments, 60, 62  
National influence in building, 4  
Need for study, 16  
Neglect, 8, 23  
Neighbor's property, attitude toward, 32  
New equipment, adjustment to, 223; effect of, 222, 223  
New residential building, cost, 1925, 15  
Newspaper ink, 28  
New York Board of Housing, 6  
Noise, an irritation, 116  
Nurse girl, 313  
Nutrition, 4; 5, 8  
  
Occupation, influence on housing, 141  
Officers, administrative, 221, 222  
Old-Law interior rooms, 77  
Oneness with group, 124  
Opaque covers, for wood, 44  
Order, 203, 206, 207  
Orderliness, 65  
Organization of jobs, 259  
Outdoor living space, 66; play space, 66

- Overcrowding, 4, 8, 73; at luxury building standard, 99; bases for judging, 96, 97; causes for, 99; chimneys a symbol of, 97; and disease, 74, 94; furnished rooms, 99; "hot bed," 100; infant death-rate, 96; jealousy, 99; land, 97; mortality, 95; North Pancras, London, 97; standards, 98; tuberculosis, pneumonia and diphtheria, 95, table, 96
- Overstuffed furniture, 195
- Ownership, 370, 389; individual problem, 392; reasons for, 395
- Paint, 43, 282-285, 294, 295
- Painting, reminders and suggestions, 48, 49
- Paneling, 2
- Paring knife, 297
- Parquet floor, 17, 29
- Patio, 5, 363
- Patterns of living, occupation, 141
- Peace, 15
- Personal habits, 28-32; careless habits, 217; possessions, 152; responsibility, 30-32, 215
- Photographs, value of, 13, 16
- Physical health, 3, 64
- Pillow cases, sizes of, 281
- Pink eye, 107
- Planning, awkward, 10, 11; effect of changing conditions, 10; effect of poor on individual, 10, 11; functional, 356
- Plant poisons, 110
- Pleasure, 163; group, 162
- Plumbing, individual inspection, 120
- Poison ivy, 110
- Poisons, 88
- Pollution, of air, 111, 112, 113
- Possession, sense of, 123
- Possessions, 28; care of, 29
- Premises, care of, 32; untidy, 105
- Pressing, 36, 37
- Preventing Damage by Termites of White Ants*, 80n
- Prevention, accidental burning, 73, 85, 86, 90; of accidents, 30, 31; self-injury, 73
- Preventive Medicine and Hygiene*, 100, 101n
- Primrose, poison, 110
- Principles and Practice of Hygiene*, 102n
- Privacy, 3, 26, 52, 68, 123, 154, 155, 184, 186, 399, 404, 405; curtains, 33, 36
- Private philanthropies, 4; philanthropy, 62
- Privileges, 370, 377.
- Producer and consumer, points of view, 18
- Producers, 11, 12
- Project, 4, 64; Federal Housing, 62; family gardening, 61; suggestions for, 32
- Projects, 52-64; large scale, 58; for lowest income groups, 63
- Property rights, 151
- Proportions, 162, 357, in curtains, 33; relation of design in floor coverings, 169; shades, door panels, lamps, 166; two- versus three-dimension problem, 163-165; wall, 165
- Protection, 3, 77, 282, 347, 399, 402; from wind, lightning, floods, earthquakes, 73; furniture covers, 40, 41; and security, 66; wood, 43
- Purchase, 370
- Quality, of paint, 282; of textiles, 264

- Radburn, a project in group housing, 365, 366  
Radiation, relationship to gas bill, 217  
Radio, courtesy, 30  
Rabies, 105  
Rat, bites, 89; wild, a menace to health, 105  
Rayon, 268, 286, 295, 296  
*Real Property Inventory*, 1934, 74n  
*Recent Trends in American Housing*, 22, 75n  
Recognition, 124  
*Recommended Minimum Requirements for Small Dwelling Construction*, 81n  
Records, 254  
Recreation, 53, 251; decoration for, 21  
Refrigerator, 12, 13, 44  
*Regulations under Title II of National Housing Act*, 58n  
*Relation between Housing and Health*, 96n  
Relationship of income to available housing, 9  
Relationships, effects and cause, 215, 216, 217, 218  
Relaxation, 3  
Remodeled apartment, 24; kitchen, 65  
Remodeling, 253; of an old farmhouse, 63  
Rent, 370, 371, 404; covers, 381; rooms, 378, 379, 380; tangible, 374; choice of housing, 375; description of, 375; values for, 377  
Renting, reasons for, 396  
Repair, 26  
Resettlement, 139; small house, 153  
Resident labor, 309, 316  
Respect, 151, 152; ownership, 152; and rights of others, 132, 134, 377  
Responsibilities, 154, 378, 379; equalizing of, 225; individual, 56, 57  
Rest areas, 2  
Resurfacing, 43  
Roofs, 358  
Rooms, 321; articulation of, 353; function of, 188; use, significance of, 130, 131  
Routine, 253  
Rubbish, a hazard, 89  
Rugs and carpets, shrinking, 279; *see also* Portfolio sections  
Rural slum, 74  
*Safe at Home*, 74n  
Safety, 2, 66, 67, 73; construction, 77-79; devices, on equipment, 91, 92; from human beings, 3; inspection, 116-118; law an aid to, 81  
Sanitary, conditions, 66; dishwashing, 119; improvements, 65; practices, 118  
Sanitation, 3, 52, 92-107; care of garbage, 32; care of kitchen, 32  
Scarlet fever, 105  
Schedules, school-girl's, 225  
Schools, 346, 405  
*Science of Life*, 111n  
Screening, 66, 107  
Second maid, 312  
Seconds, 280; in towels, 279  
Security, 399, 403; economic, 145, 157  
Self-respect, 3, 124  
Semi-fireproof construction, 83  
Senses, 3  
Services, 371, 377; building, 403; community, 322  
Shades, 186

- Shaker, influence in furniture, 185, 186  
Shapes, houses, 358  
Sheet, 293; label, 271; sizes, 281  
Shellac, 43  
Shelter as protection from disease, 3; protection from natural hazards, 3  
Shipyard workers, houses, 393  
Shrinkage in wood, 195  
Shrinking, furniture cover fabric, 39; need for judgment concerning, 36  
Sick, care of, 250  
Silk, 268, 286  
Sink, adjustment, 205  
Site, location, 341  
Situations, 219, 220  
Sizing, 276  
Skin diseases, 109  
Sleeping, provision for, 233  
Slum, 3, 4; clearance, 4, 60; fashion, 2; rural, 20  
*Small Home, The*, 341n  
Social, adjustments, narrative picture, 125-128, 131, 132; amenities, 9; attitude toward group, 132, 134; changes, effect of general, 131; influences of upon one's manner of living, 137; patterns in home, 128-131; prestige, 3; security, 123, 151  
Sound deadening, 116  
Space, 377, 397, 399; maximum use, 9, 10  
Spanish, 5, 363  
Special assessments, 371  
Spinal meningitis, 102  
Splint weaving, 51  
Stains, 43  
Standard, service, 323  
Standards, 1, 2, 64, 81, 149, 256, 257, 258; bad, 7; bases, 2; return of borrowed possessions, 30; building repair, 2; building use, 2; building construction, 2; discussion questions for, 121; effect of common use on, 27; effect on health, 7; eye appeal, 2; for demolition, 83; human housing, 7; individual, 150; labor, 317; lack of convenience, 7; Medical Officers of Health, Manchester, England, 98; minimum, 75, 76; minimum in rented rooms, 379; national, 9; obvious, 2; overcrowding, 96; regarding employees in home, 104; rural, 7; tourists' rooms, 377, 378; urban, 6  
Storage space, 65  
Stove, decoration, 182; electric, 300-303; gas, 12, 13, 300; range, 299  
Strains, muscle, 88  
Streets, 367  
Study, suggestions, 261; visits, 160; arrangement for, 16-18, 38  
Style, architecture, 4, 365, 366; furniture, 194; historic influence, 362, 363  
Subsistence homestead, 139, 140  
Substandard, 74  
Sunlight, functions of, 114; and eye strain, 115; rotting effect, 278; on tuberculosis, 94  
Sunshine, 34  
Surfaces, 361  
Syphilis, 101  
Table cloth, embossed pattern, 275  
Tapestry, 275  
Tastes, 162, 197; similarity, 220  
Taxes, 371, 390  
Teaching, 315  
Temperature, 3, 66; sensitivity to, 111

- Tenant, 371  
Tension, uneven, 279  
Termites, 80  
*Termite City*, 80n  
*Termites, The Grim Society of*, 80n  
Test your reading, 20  
Tetanus, 104  
Textiles, 264-285, 286; defects in, 275; wear of, 216-218  
Texture, in materials, 176, 177; influence of design, 176, 177  
Theatrical gauze, 187  
"Thirty Things To Buy," 341  
Thoughtfulness, 219  
Torrens system, 386  
Topography, 350  
*Tourists' Homes in Maine*, 377n  
Towels, hand, glass, 269  
Transportation, 344, 345, 399, 405  
Trailers, 97  
Training, lack of, 314  
Tuberculosis, 94  
Tutoring and teaching, 250-251  
Typhoid fever, 102  
Typhoid Mary, 102  
  
Unemployment, 4  
United States Department of Commerce, 75  
United States Department of Commerce, National Bureau of Standards Division of Codes and Specifications, 81  
United States Housing Authority, Division of Research and Information, 60  
Upholstery, 286, 287  
Upkeep, 5, 26, 252; and repair, 371  
*Use of Time by Oregon Farm Homemakers*, 11n  
Use, privileges, 370, 371  
  
Vacuum cleaner, 291  
Vacuum cleaning, 113  
Value, architecture, 356; ground or site, 341; housing, 379, of location, 338-353; paint, 282-285; quality and, 264; space, 353; unseen in furniture, 285-289; versus cost, 397, 398, 399, 400, 402  
Varnish, 43  
Veneer, 288  
Venetian blinds, 4, 186, 199  
Ventilation, 73, 113  
Vermin, a hazard, 92  
View, 34  
  
Wall paper, choice of, 46-47; *see also* Portfolio sections  
Walls, decoration of. *See* Portfolio sections  
War, 14; costs of, 14  
Wash cloths, care of, 31, 32  
Water spots, on varnish, 43  
Wax, 43  
Weighting, in textiles, 274  
White House Conference, 58  
Wilful destruction, 23  
*Will We Wipe Out Malaria*, 107n  
Windbreak, 351  
Windows, 359, 360, 361; as center of interest, 2; care of, 31; leaded glass, 28; milk receiving, 235; shades, 30; treatment of, *see* Portfolio sections  
Windsor chairs, 194  
Wood, Mrs. Edith Elmer, 75  
Wood, seasoning of, 195, 285, 287; effect of drying, 195  
Wooden house, judging of, 79  
Wool, 266-268, 286, 296  
Worker, ability, 323  
Work, amount, 321; areas, lighting of, 224; as aid to learning,

Work (*Cont'd*)

221; effect of conditions of house, 255; working familiarity, 207; kinds of household, 233-251; permanency of family assignment, 223; permanent division of, 223; quality of with machines, 291; relationship, 306; schedules, sex basis, 223, 318-320

Workmen, special, 252

Worktable, adjustment, 205

World War, 8

Worry, 77

Yard, improvement of, for outdoor eating, 58

Yellow fever, 107

Zoning, 348; project, 56

(1)











Date Due

*Melvin*

67857

CAMERON

THE AT  
BOOK BIN  
(1961) L  
10770 95 St.,  
Phone 422

TX 301 S56 c.1  
Shultz, Hazel, 1891-

Housing and the home,  
SCI/TECH



0 0004 4903 888

A4037